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ABSTRACT

The youth smoking problem is discussed and assistance is provided for teachers in developing smoking prevention and cessation programs. Four chapters serve as guides to understanding and working with the youth smoking problem. "Teenage Smoking in America" reviews trends in teenage smoking behavior and the factors that influence the initiation of smoking. "Approaches to Smoking in Schools: Regulation and Education" reviews the historical approaches to combating the teenage smoking problem. "How to Develop a School Smoking Program" suggests procedures for initiating smoking education programs in curriculum development. "Current Smoking Education Programs" describes several innovative smoking education programs. The appendix presents information on additional resources, resource organizations, and contemporary texts on school health education. (JN)

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SMOKING PROGRAMS FOR YOUTH

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Preface

Smoking Programs for Youth is the result of numerous requests from teachers, school administrators, health professionals, and parents who had read *The Smoking Digest* (published by the National Cancer Institute in 1977), and who indicated the need for a companion document devoted to youth. The Office of Cancer Communications began work on *Smoking Programs for Youth* in the summer of 1978. Since then, the document has undergone numerous revisions, partly stimulated by the release of *Smoking and Health: A Report of the Surgeon General (1979), Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention (1979)*, and *Teenage Smoking: Immediate and Long-Term Patterns*, the most recent survey of teenage smoking behavior released by the National Institute of Education in November 1979.

Healthy People emphasizes what many scientists, health professionals, and public officials believe about the improvement of health in the United States; namely, that the factors which contributed to health improvement in the past—greater food production, improved sanitation, and advances in medical technology—will have only marginal impact in the future. The next "breakthrough" in health improvement in the United States will come when there is widespread acceptance of the role individuals must play in safeguarding their own health, as well as a greater understanding of the specific actions that can be taken.

The acceptance of personal responsibility in the areas of diet, exercise, alcohol and drug use, stress management, and regular examinations for the early detection of disease is extremely important. However, one personal-choice behavior—cigarette smoking—has consistently and unequivocally been identified as the leading preventable cause of death and disability in the United States. Most smoking-related diseases (cancer, heart disease, emphysema, chronic bronchitis, and others), once they have advanced to the detectable stage, have already done much damage. Although medical professionals can attempt to reduce the impact of these diseases, death and disability from smoking-related illnesses can be expected to increase unless individuals make the firm decision to avoid the smoking habit entirely, or abandon it early.

The most appropriate place to begin the educational process to encourage nonsmoking is in elementary and secondary schools, before most people have initiated the smoking habit. *Smoking Programs for Youth* is intended to be an action-oriented document, one that will provide information necessary to understand the youth smoking problem and to stimulate decision-makers to develop smoking prevention and cessation programs.

The document is divided into four sections:

1. *Teenage Smoking in America.*—This chapter reviews trends in teenage smoking behavior, and the major factors that influence the initiation of smoking.
2. *Approaches to Smoking in Schools: Regulation and Education.*—The historical approaches to combating the teenage smoking problem are discussed as well as the characteristics of more promising approaches in use today.
3. *How to Develop a School Smoking Program.*—Chapter 3 suggests procedures for initiating smoking education programs, ranging from easily undertaken projects through comprehensive curriculum development.

4. *Current Smoking Education Programs.*—The final section reviews in detail numerous innovative smoking education programs which have been pilot-tested and can be considered for adoption by interested school districts.

This document is intended to bridge the gap between the innovators in the teenage smoking field and the concerned decision-makers who stand ready to implement tested approaches in their schools. If *Smoking Programs for Youth* achieves this purpose, a further reduction in teenage smoking in the United States should be the result.

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Chapter 1

Teenage Smoking in America

The Problem

Cigarette smoking has been termed "slow motion suicide" because of the well documented relationship between smoking and a number of serious diseases. There are more than 350,000 deaths each year in the United States that are directly related to smoking: the estimate for 1978 included 80,000 deaths from lung cancer, 22,000 from other cancers, up to 225,000 from cardiovascular disease, and more than 19,000 from chronic pulmonary disease.[1]

Cigarette smoking costs this country about $27 billion each year in direct medical care, absenteeism, decreased work productivity, and accidents. These costs have the most direct impact on smokers; however, the cost is partially borne by the public through higher health insurance premiums, disability payments, and other private and taxpayer-supported health programs. Cigarette smoking is the single most significant preventable factor contributing to illness, disability, and death in the United States.[2]

There are many promising trends which indicate that cigarette smoking is on the decline. Ninety percent of all U.S. adults are aware of the grave health con-

sequences of smoking. An estimated 30 million men and women have kicked the habit since 1964. Nine of ten people who still smoke say they have either tried to quit or would do so if there were an easy way.[3]

These trends, though encouraging, are balanced by others which indicate the difficulty of abandoning the smoking habit once it is developed. Over 50 million persons in the United States still smoke. Of the roughly 17 million adults who tried to stop smoking in 1978, only 3.5 million were successful.[4] And thousands of new smokers are being recruited daily from among the nation's youth.

Teenage Smoking Trends

Although the percentage of adult smokers in the population dropped from 42 percent in 1964 to 33 percent in 1978,[5] teenage smoking was on the *rise* until very recently. The statistical evidence of what appeared to be an epidemic of smoking among young people has been a major concern of educators, health officials, and parents.

As the chart below illustrates, between 1968 and 1974 the percentage of 12- to 18-year-old boys who reported smoking regularly rose slightly from 14.7 percent to 15.8 percent; among girls in this age group, the percentage of smokers almost doubled, from 8.4 percent to 15.3 percent.[6] Since 1974, however, there have been reductions in self-reported teenage smoking rates that are just as dramatic as the previous increases, especially among young men. A 1979 survey showed that 10.7 percent of boys and 12.7 percent of girls between 12 and 18 years of age report smoking regularly.* Thus, about 12 percent of all young people—3.3 million in all—were regular smokers. This represents a reduction of about one-quarter from the rate in 1974.[7]

Between 1974 and 1979, there have been important declines in the percentage of young men and women smokers in all age groups, with the exception of young women age 17 and 18, whose smoking rates appear to be leveling off.

Teenage Smokers in the United States

Age group	*Sex*	*1968 Percent*	*1974 Percent*	*1979 Percent*
12 - 14	Male	2.9	4.2	3.2
	Female	0.6	4.9	4.3
15 - 16	Male	17.0	18.1	13.5
	Female	9.6	20.2	11.8
17 - 18	Male	30.2	31.0	19.3
	Female	18.6	25.9	26.2
12 - 18	Male	14.7	15.8	10.7
	Female	8.4	15.3	12.7
	Both sexes	11.5	15.6	11.7

Estimated prevalence of current regular cigarette smoking, ages 12 to 18, United States, 1968-79. Source: Nationwide teenage smoking surveys performed for National Clearinghouse for Smoking and Health (1968, 1974) and National Institute of Education (1979). Absolute population estimates based on U.S. Resident Population as reported by Bureau of the Census (July 1 of survey year).

Smoking among young women remains a serious problem, in spite of the general downward turn in smoking rates among both sexes. Although the percentage of teenage girl smokers is declining, declines among young men have been much more dramatic. The result is that, for the first time in our history, the

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***A regular smoker is defined as someone who has at least one cigarette per week. In 1979, approximately 90 percent of current regular teenage smokers used cigarettes daily.**

number of females who smoke in a major age group (12 to 18) actually exceeds the number of smoking males. These are disturbing statistics in light of increasing evidence about the dangers of smoking for women. It has been predicted that by 1983, lung cancer will surpass breast cancer as the leading cause of cancer deaths among women. Women who both smoke and use oral contraceptives have a greater risk of heart attack and stroke. There is evidence that smoking during pregnancy can do significant harm to fetuses and newborn babies. And there are indications that cigarettes may be even more addictive for women than for men. For whatever reasons, women seem to have a more difficult time than men giving up cigarettes and remaining ex-smokers.[8]

Although the reasons for the general decrease in the percentage of young smokers over the last several years cannot be precisely determined, several influences appear to have contributed to the decline. First, health hazards of cigarette smoking are well known to young people. In one survey, 96 percent of all teenagers (and 89 percent of the teenagers who smoke) believed that smoking is harmful to health. Eighty-nine percent of all teenagers (and 77 percent of smokers) knew that smoking can cause heart disease.[9]

Another factor which may influence teenage smoking rates is the change in smoking behavior of parents, teachers, coaches, doctors, and other adults admired by young people. The fact that millions of adults have either become ex-smokers or have tried to quit smoking in the last several years has undoubtedly had some effect on teenage smoking attitudes and behavior.

In addition, there is a growing tendency among both smoking and nonsmoking Americans to view cigarette smoking as a socially unacceptable activity. Increasing numbers of states and municipalities have passed "clean indoor air" legislation that prohibits smoking in stores, elevators, restaurants, government buildings, indoor sports arenas, and other public places. These laws are in response to growing public sentiment against "second hand" smoke. One survey showed that 63 percent of the population (including 35 percent of smokers) found it annoying to be near a person smoking cigarettes.[10] Thus, the growing interest in a clean environment and the rights of nonsmokers have made cigarette smoking a less attractive habit.

Finally, an increasing number of schools around the country are developing and implementing smoking education programs to discourage young people from beginning to smoke and to help those who already smoke kick the habit. Although the exact effects of these smoking prevention and cessation programs on teenage smokers are difficult to calculate, their positive influence should not be overlooked.

Whatever the reasons, the encouraging new survey data reflect real progress in the battle against teenage smoking. Public and voluntary health officials, health education specialists and school health program planners, administrators, and instructors can all take advantage of this progress by renewing their efforts to implement relevant and effective smoking prevention and cessation programs for young people. Because the trends are now running against the smoking habit, it is a good time for even more concentrated efforts to encourage and assist teenagers to adopt a nonsmoking lifestyle.

Predictors of Smoking Behavior

In order to develop effective smoking prevention and cessation programs for young people, it is important to understand the predominant reasons why young people begin to smoke in the first place, why they continue to smoke once they start, and how these influences can be counteracted. As stated earlier, the great majority of young people are aware of the hazards of cigarette smoking. Yet approximately 1 million adolescents begin to smoke each year. Several reasons have been suggested to explain why knowledge of the health consequences of smoking is not sufficient to deter young people from beginning to smoke. Young children between the ages of 4 and 10 may literally believe that smoking several cigarettes will cause lung cancer or a heart attack. However, as they grow older, children realize that the adults around them who smoke are not dying immediately and that many of them will never get cancer or have a heart attack. Thus, they begin to discount the risks involved in smoking.[11]

In addition, young people are generally healthy and cannot identify with the concept of dying from a disease that may appear in 30 or even 50 years. The present-orientation of adolescents appears almost as a belief in immortality. The future holds much less concern for them than their immediate needs. Thus, knowledge of health risks may fail to influence decisions about their behavior.

In fact, becoming a smoker is immediately gratifying and valuable to many teenagers. Smoking often gives young people increased status among their friends who smoke, makes them feel more mature because smoking is considered an adult habit, and may serve as an act of defiance towards authority figures who have forbidden them to smoke.[12] Smoking becomes a symbolic act reflecting their transition from dependent to independent beings.

It is natural for young people to experiment with cigarettes. By the time they are 18, many have tried smoking. Yet only about one in ten becomes a smoker. Why? In order to understand the phenomenon of teenage smoking, it is important to look at the differences between those who begin to smoke regularly and those who do not.

Although all adolescents are potential smokers, there are a number of factors that influence whether or not a young person will begin to smoke. While some of these factors can be directly addressed in school smoking education programs, (i.e., providing a school environment that discourages smoking), other factors are more difficult, if not impossible, to affect by educational efforts (i.e., a student's socioeconomic status). However, it is important to understand *all* the characteristics that help predict those students who are most likely to become smokers. Those adolescent groups more likely to contain future smokers can be targeted for special smoking prevention programs in the early grades in an attempt to counter smoking influences with positive educational messages and experiences.

The following factors are important elements in determining smoking behavior and should be given careful consideration in developing smoking prevention and cessation programs for young people.

Age and Sex

A young person's age and sex influence the probability that he or she will begin smoking. As can be seen in the table on page 2 and as indicated in the 1979 Surgeon General's Report, students are more likely to begin smoking as they become older:

> Inferences about the evolution of smoking suggest that by the end of the ninth grade very few adolescents are confirmed smokers. The critical level of the onset of confirmed smoking appears to be in high school.[13]

In a 5-year study of teenage smokers completed in 1979, results indicate that the median age at which young smokers take up the habit is 16.4 years for males and 16.1 years for females.[14]

Onset of smoking has been linked to the period in which young people begin to question the behavior codes laid down by parents. It is at this time that some parents begin to tolerate cigarette smoking by their maturing children. In addition, as students move from elementary to middle or junior high school, and on to high school, they are exposed to a large number of older students and more frequent opportunities to smoke, as well as a social environment that supports smoking as a symbol of adulthood and independence.[15] These transition points are important intervention opportunities for smoking education programs.

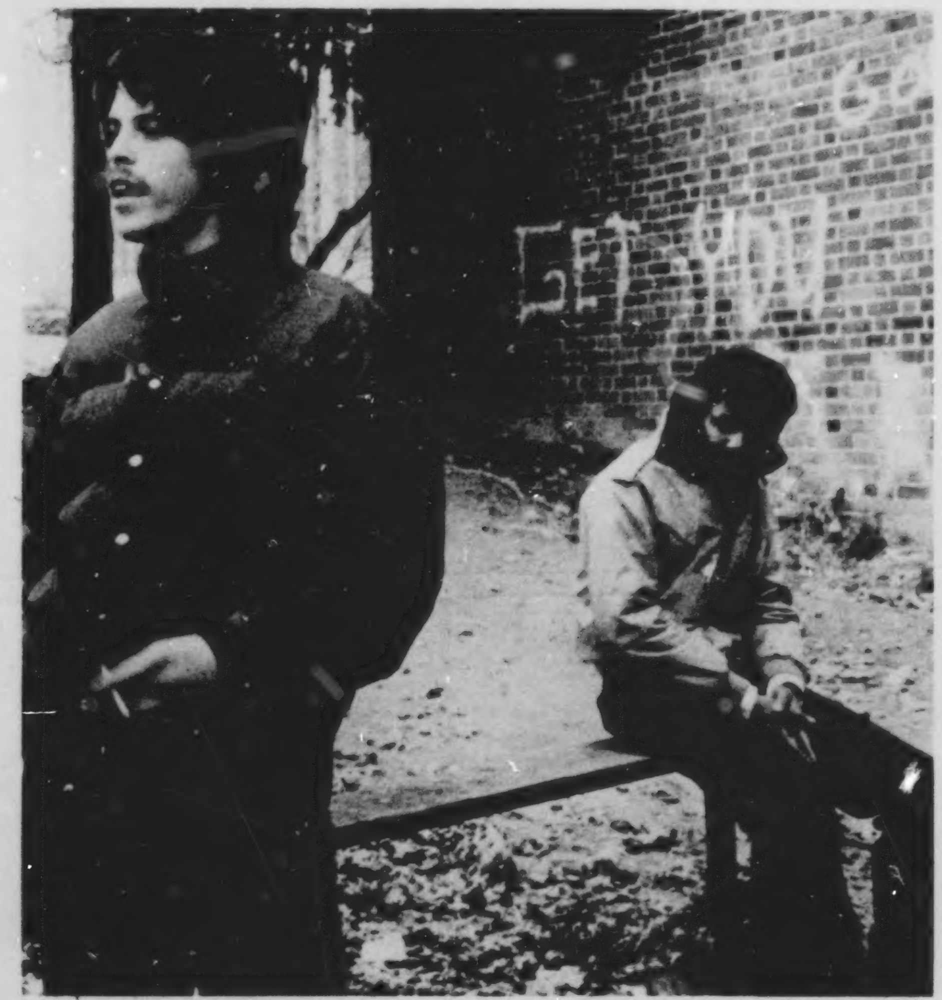
Until recently, national surveys indicated that regardless of age group, more males smoked than females. However, the most recent teenage data show, for the first time, female smokers exceeding male smokers in the 12–18 age group. As a result, smoking education programs developed for, and directed toward, young women are more important than ever.

School Environment

Since school plays a dominant role in the life of children and adolescents, the school environment provides its own set of factors that influence young people's smoking decisions.[16] The content and message of the school's smoking education program, the presence or absence of smoking regulations and the smoking attitudes and behavior of teachers, coaches, nurses, and other administrative and support staff all may influence the student's smoking decision. The importance of creating a school environment that discourages smoking and promotes healthy behavior is discussed in detail in later chapters of this book.

Peer Pressure

The need to belong, to "fit in," to be accepted, is strong in all of us, but it is a particularly intense desire in adolescents. Young people are often self-conscious, vulnerable to criticism, and anxious to gain the friendship of others their own age. Peer pressure—the powerful influence exerted by friends in the same age group to conform to group behavior—is a major factor in initiating smoking behavior, particularly among younger adolescents.[17] In one study, researchers reported that having a best friend or group of friends who smoke seemed to be the best predictor of smoking in children from the fifth through the twelfth grade.[18]



It is difficult to differentiate the extent to which peers influence adolescents to smoke from the role that smoking may play in one's choice of friends. Whatever the reason, a 1979 survey by the U.S. Department of Health, Education, and Welfare found that almost nine of ten adolescent smokers reported that at least one of their four best friends was a regular smoker, while only one in three nonsmokers had a smoker among his or her best friends. One in five nonsmokers reported that *none* of his or her four best friends had ever smoked a cigarette, while only one in 100 smokers made this claim.[19]

One of the most promising approaches to smoking education involves teaching young people how to combat peer pressure to smoke, to benefit from and contribute to growing peer pressure not to smoke, and to make their own informed decisions about smoking. This particular approach and others are discussed in chapters 2 and 4.

Advertising

Although television and radio advertising of cigarettes was banned in 1971, tobacco companies still spent $800 million in 1978 promoting and advertising their products through American newspapers, magazines, billboards, and display cards.[20] Most cigarette advertisements use young, attractive, athletic, and healthy-looking models. The tobacco companies deny that their ads are designed to influence young peoples' decisions about whether or not to begin smoking, but their portrayal of smokers as young, sexy, daring, and sophisticated may well affect smoking decisions made by adolescents.

Health educators can serve to counteract the influence of cigarette advertisements by encouraging students to discuss and analyze their impressions of the models and messages used in the ads. Programs can be designed in which students learn to dissect and disprove these messages, while also being taught the skills to combat them in their daily lives.

Family Influences

The smoking habits of parents clearly influence the smoking behavior of their children. In spite of the fact that adolescence is often described as a rebellious period, some young people do not reject, but rather conform to, one major custom of their elders: cigarette smoking. Parents who smoke are likely to have children who smoke. If both parents smoke, a teenager is more than twice as likely to smoke than a young person whose parents are both nonsmokers. In households where only one parent smokes, young people are also more likely to start smoking. Seventeen- and 18-year-olds appear to be more likely to smoke if their mother smokes than if their father does.

Young people emulate older siblings as well. A teenager with an older brother or sister who smokes is extremely likely to be a smoker. Young people who have both a parent *and* an older sibling who smoke are four times as likely to smoke as those who have no smoker in the immediate family.[21] As the U.S. Public Health Service noted in its study of teenage smoking:

> Smoking appears to be one of those customs which families as a whole either adopt or do not adopt. Just as in some families a coffee pot is always on the back of the stove, in some homes cigarettes are readily available for family members to help themselves.[22]

Family influences cannot be directly altered by the school. However, an enthusiastic student enrolled in a smoking education program might be able to influence the smoking behavior of his parents, brothers, and sisters by discussing his concerns about their health, by offering to help them kick the habit, or by convincing them to attend smoking cessation clinics. On the other hand, it is also possible that his expression of concern and offers of assistance and advice may have little or no effect on his family's smoking habits.

Socioeconomic Influences

Studies show that adults with lower income and educational levels are more likely to smoke than college-educated adults in higher income brackets.[23] These patterns are also observed among children. High school students enrolled in college preparatory courses are less likely to smoke than those enrolled in any other course of study.[24]

In general, teenagers who work, either full- or part-time, are twice as likely to be smokers as those who do not work.[25] Young people who do not work may be more protected and therefore less independent than those who work with adults.

Although the socioeconomic status of students is not necessarily a cause of their smoking behavior, and cannot be altered by smoking education programs, an awareness of those socioeconomic traits that are associated with teenage smoking can help health educators target smoking prevention and cessation programs to students who are most likely to begin.[26]

Individual Characteristics

A number of studies have identified certain personality characteristics that separate young smokers from their nonsmoking counterparts, although attempts to predict precisely potential smokers by their personality traits have been unreliable and sometimes contradictory.

One government survey found that teenage smokers are more likely to chafe under rules imposed on them by adults: they are less likely than nonsmokers to turn to their parents for advice and more likely to believe that teenagers should be able to do what they want than are nonsmokers.[27]

More than half the female teenage smokers in another survey expressed annoyance with experts who told them what was good for them and agreed with the statement, "There is too much regulation of people's lives."[28] Another researcher found young smokers to be more likely to fail in school, eager to grow up, rebellious, impulsive, and willing to take risks than nonsmokers their age.[29]

According to one study of smoking among teenage girls and young women, many more teenage girl smokers dislike school and have been suspended or expelled from school than girls who do not smoke.[30] Another study characterized young female smokers as appearing to their peers to be more confident, outgoing, and at ease socially than nonsmoking girls.[31]

Teenage smokers are much less likely than nonsmokers to believe that they are in control of their future lives. Nonsmokers appear to have a more developed "internal locus of control," believing that they have the power to determine their own futures.[32]

Knowing which students are more likely to begin smoking and which factors influence adolescents in their decision to adopt or reject the smoking habit is important to the development of effective smoking education programs. However, this information only serves to begin the program development process. Numerous approaches have been attempted in the past to educate youth about the hazards of cigarette smoking, to prepare them to make informed decisions, and to regulate their smoking behavior in the school setting. Chapter 2, "Approaches to Smoking in Schools: Regulation and Education," reviews these approaches and suggests avenues to pursue *and* avoid in developing meaningful programs.

Chapter 2

Approaches to Smoking in Schools: Regulation and Education

School administrators all over the country are reassessing their approaches to student smoking. Many school systems are developing comprehensive school smoking policies that actively address the interplay between smoking, health, and students' attitudes, behavior, and needs, rather than relying on regulation as the solution to the school smoking problem. Students, too, are becoming increasingly interested in their own health and in maintaining a healthy environment in their schools. This approach to health on the part of students and educators may be paying off. In the last 4 years, the percentage of teenage smokers in the population has dropped dramatically, as previously noted, and many young people who still smoke are seeking help in breaking the cigarette habit. For all involved, smoking in schools has become less an issue of rules and regulations and more a behavioral and health concern that needs to be addressed as such.

This chapter discusses the evolution of regulations and policies relative to smoking in American schools, and considers the range of issues involved in establishing school smoking-regulation programs. It then reviews the three major types of school smoking-regulation programs currently in effect. The second portion of the chapter is devoted to a consideration of school health education in general and of smoking education as a part of this larger curriculum area. Here, the types of approaches currently being implemented by school administrators around the country to deal more effectively with student smoking are explored.

Regulations and Policies

A number of national health and education organizations, state governments, and local school systems have adopted policy statements, laws, and regulations designed to curb student smoking. A review of these actions may help program planners develop and implement school smoking programs that best reflect the needs, attitudes, and behavior of the students in a particular school or school system.

Smoking rules and regulations are implemented to prevent students from beginning to smoke and to control the times and places where students can smoke. Regulations may serve other purposes as well: to prevent fire hazards, to protect the rights and health of nonsmokers, and to effectively reinforce the message of school smoking education programs.

However, rules and regulations by themselves cannot be relied upon to solve the school smoking problem. In fact, rules may initiate rebelliousness among some adolescents. The complex array of factors that influences young people to begin smoking and to continue smoking must be addressed in creating a comprehensive smoking education program.

In addition, school boards and administrators are faced with the problem of creating smoking regulation programs that can be effectively enforced; this issue is also considered in the following discussion.

National, State, and Local Mandates on School Smoking

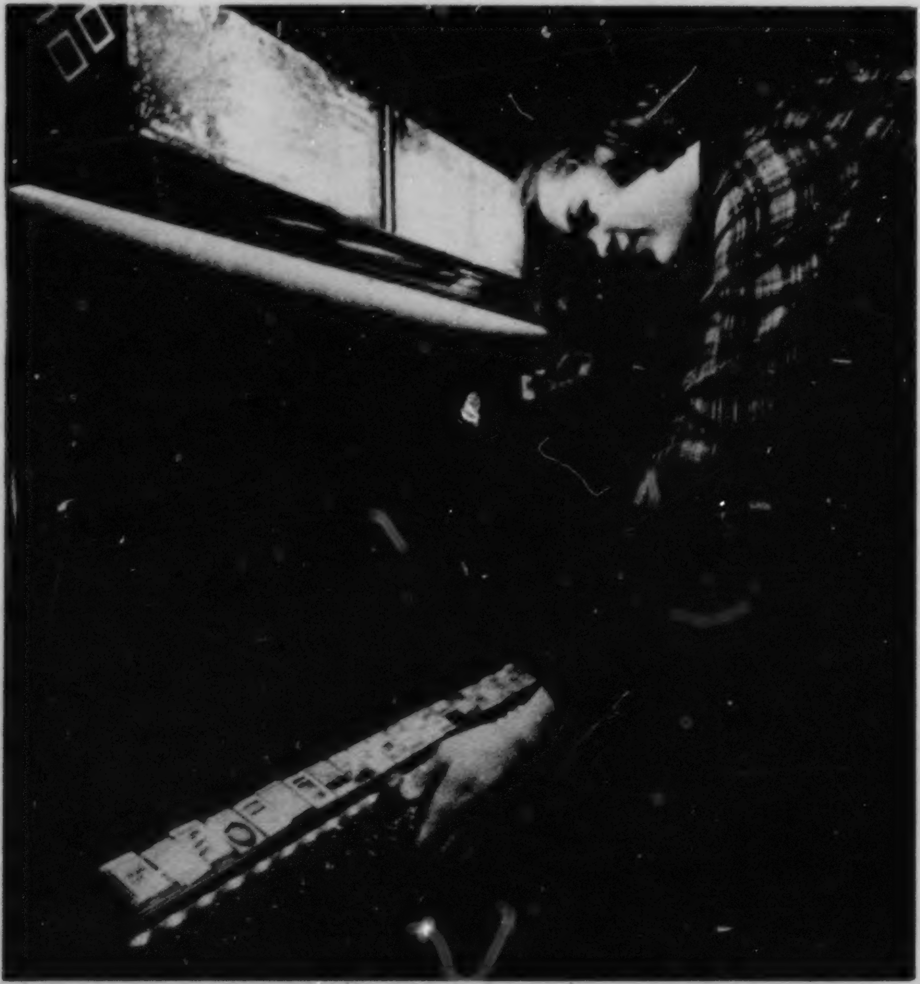
Policy Statements

Several national organizations have issued statements regarding school smoking to guide the decisions of local policy-makers. For example, the National Association of Secondary School Principals (NASSP) cautions that establishing school smoking lounges "may well implicitly promote smoking in the public schools." Rather than approving school smoking, NASSP believes that intensive educational programs should be instituted to prevent or stop smoking among students.[33]

The American Association for Health, Physical Education, and Recreation adopted a forceful position in 1971. Declaring that the research on smoking has made it abundantly clear that cigarette smoking is hazardous to health, the association recommends that no smoking be permitted by any groups utilizing school facilities and that smoking areas for students and faculty members be abolished.[34]

State Laws

Thirty-five states have passed laws that prohibit smoking by minors. Although these laws should effectively govern smoking on school property, there are broad inconsistencies within these codes. For instance, minors are immune from tobacco laws in 13 states if they have parental permission to smoke, and in two states if they divulge the names of their tobacco suppliers. Only two state laws require that minors who violate tobacco laws in school be suspended or expelled.[35] Thus, although most states have passed laws regarding tobacco use by minors, these laws are rendered ineffective by the availability of cigarettes to anyone through vending machines and by cultural norms that discourage the enforcement of such laws.[36]



State Education Policies

A number of state departments of education have developed their own policies regarding school smoking. In Oregon, the Department of Education policy states that smoking is hazardous and that most public schools cannot accommodate large numbers of smokers of any age. In developing school smoking policies, state officials believe that a number of factors must be considered, including the health and safety of students, the educational responsibilities of the schools, and the rights of nonsmokers as well as the rights of lawful smokers. Oregon's policy states:

> Those 18 years of age or older are allowed to use tobacco in accordance with the times and places designated by the school board. However, there is the further stipulation that students are liable for their habits to the extent that (smoking) may preclude their participation in other school activities.[37]

In Michigan, those who are 18 years or older may legally purchase tobacco, but state laws prohibit smoking in school buildings, on school grounds, or at school functions. The Michigan Department of Education urges schools to discourage young people from starting to smoke by developing programs to teach students about the health hazards of smoking.[38]

In those states that have no formal policy on school smoking, some boards of education encourage local school systems to implement their own guidelines to discourage school smoking. Others have adopted the recommendations of the American Association for Health, Physical Education, and Recreation's 1971 policy statement regarding school smoking.

School Smoking Regulations

For some time, student smoking has been a major disciplinary problem in American schools, and the issue of whether or not to permit smoking in school has created a great deal of controversy among school administrators around the country. Despite the fact that most schools have rules governing smoking in buildings and on the grounds, more and more students seem to ignore them.[39]

School administrators are placed in a difficult position in their attempts to solve the school smoking problem. Some have enforced strict regulations against smoking by suspending or expelling violators. Others acknowledge that it is the school's responsibility to inform students about the hazards of smoking, but believe that preventing student smoking is virtually impossible.[40] Given the reality of student smoking, school administrators are faced with a dilemma: should they attempt to enforce strict antismoking regulations; should they keep the regulations on the books but concede that they are unenforceable; or should they permit smoking either in designated rooms within the building or in outdoor smoking areas?[41]

Daniel Horn, former director of the National Clearinghouse for Smoking and Health, believes the school has a responsibility it cannot ignore: "Does a school want to sanction smoking by permitting it, and thus say, 'We approve of your doing things that will harm your health?' Or does it want to say, 'We will not permit it. We will not help you do something that is not in your interest.' "[42] However, as the National Association of Secondary School Principals warns in its policy statement, "There is general agreement that it is one thing to assume moral positions and another to implement those positions."[43] Many school boards have decided to permit student smoking, usually in outdoor areas during specified times of the day and only with parental permission. Most educators who have softened their regulations admit that the decision was made reluctantly, more out of expediency than out of conviction.[44]

Schools that prohibit student smoking or permit it only under certain conditions usually have strict penalties for students who do not comply with these regulations. Students can be suspended for short periods of time for the first offense, with increasing penalties for repeated infractions. Some schools require offenders to attend antismoking clinics, and others have initiated mandatory smoking education programs to accompany their regulations.[45]

Whether or not school smoking regulations are effective in discouraging student smoking is debatable. A 1974 survey of high school principals found that designated smoking areas and student suspensions and expulsions were judged to be ineffective procedures for controlling high school smoking problems. When asked to choose the most effective means of controlling smoking in schools, 49.5 percent of the principals named educational programs and 14.5 percent identified school athletic events. Less than 1 percent of the principals suggested supervision as a way to control the problem.[46]

A significant barrier to student acceptance of school smoking regulations is that such rules create a double standard. Administrators and teachers restrict student smoking because of health and safety considerations, but they do not make rules that curtail their own smoking behavior. In a 1976 American Cancer Society survey, 70 percent of 1,577 public school teachers surveyed thought that teachers should be permitted to smoke on school grounds, while only 13 percent favored the same policy for students.[47]

Since it is generally acknowledged that young people's attitudes and behavior regarding smoking are influenced by the behavior of adults, many educators have suggested that it is essential that school personnel serve as positive role models for their students.[48] This does not necessarily mean that teachers who smoke must

hide their habit from students. Rather than retreating to the teachers' lounge between each class to hide their habits from students, those teachers who smoke but want to quit might consider being open with students in expressing the wish that they had not taken up the habit in the first place.

Although the trend has been for schools to be more permissive in their smoking policies, the recent nonsmokers' rights movement, concerns about the health effects of second-hand smoke, and the proliferation of laws prohibiting smoking in public places may result in a reversal of present patterns. Few people directly involved in smoking education advocate even tacit approval by schools of student smoking.[49]

Current School Smoking Regulations

Despite the complex issues involved in mounting school smoking regulations, it is possible to identify three general categories of regulations currently in effect:

- those that prohibit smoking anywhere on school grounds and punish violators by suspension or expulsion;
- those that permit smoking only in designated areas and penalize offenders;
- those that offer rule-breakers smoking education and cessation courses as alternatives to suspension or expulsion.

Strict Smoking Prohibition Programs

Unified School District 457 in Garden City, Kansas, has instituted a school smoking-regulation program that strictly enforces automatic 5-day suspensions for student smoking. Superintendent Horace Good notes that enforcing such a strict penalty was difficult at first. "We did make some parents resentful. They would say, 'You mean my kid smoked a cigarette and he's out of school for 5 days?' But we said the rules were clear and that the student had overtly disobeyed them. Parents finally came to accept the penalty."[50]

In Hacienda La Puenta Unified School District, 20 miles from Los Angeles, the school board stood firm in its refusal to allow student smoking when a new state law made school smoking a local option. The law declared that if schools decided to permit student smoking in designated areas, they also had to establish "effective programs to discourage the use of tobacco." Gene Dezzutti, a zone administrator in charge of school operations says, "We just felt it was a contradiction, having to teach the evils of tobacco on the one hand and to allow students a smoking area on the other."[51]

Designated Smoking Area Programs

A growing number of schools have relaxed their once rigid smoking regulations in recognition of the reality of student smoking and the difficulty of enforcing rules.[52] The Montgomery County, Maryland, school system concluded that students are going to smoke and that it is better to allow smoking outside than inside. Several years ago, the school board repealed its antismoking regulations when it realized that attempts to enforce the rules only resulted in more control problems, and that there was little parental support for the regulations. Smoking is now permitted in designated outdoor areas, but only with parental consent. However, perhaps in an attempt to balance the effect of more permissive smoking regulations, the county has instituted a formal smoking education curriculum that begins in elementary school and continues through high school.[53]

Regulation Combined with Education Programs

Most educators and health agency officials agree that the ultimate solution to the school smoking problem lies in an effective comprehensive smoking education program.[54] A number of schools have developed alternatives to student suspensions or expulsions that focus on changing young people's smoking attitudes and behavior.

Suffern High School in Suffern, New York, for example, designated an outdoor smoking area after nonsmoking students complained about crowds of smokers in the lavatories. Students who wish to smoke cigarettes must obtain parental permission and must attend a smoking education program, the main thrust of which is to inform students of the hazards of smoking cigarettes. If a student does not attend this mandatory education program, the student's smoking privileges are revoked.

Assistant Principal Guy Guccione says:

> It sounds kind of hypocritical to provide students with a place to smoke and then tell them they shouldn't. But . . . we feel we've done what's best for all the students. You either have to put up with smoking inside your building or outside your building. We'd rather have it outside. There's a less tense atmosphere around here now.[55]

The Los Angeles school system mandated that all district high schools enforce no-smoking regulations. As a result, approximately 20 students were being suspended each week from one high school alone. David Ptashne, a school health educator, developed a pilot program at John F. Kennedy High School as an alternative to student suspension, in cooperation with the San Fernando Valley Unit of the American Cancer Society. The program, called "Student Options on Smoking," involves a 4-hour class that is offered to students who violate school smoking regulations as a voluntary alternative to suspension. The class helps students discover why they smoke through the use of a slide presentation, a film, and a

discussion with a volunteer from the Lost Chord Society (a group of people who have had laryngectomies) on how smoking has affected his or her life. Seven schools in the Los Angeles public school system are currently using similar programs, as are other school districts in California.[56]

Education

Smoking education, to be effective, should form an integral part of the school health education curriculum. It is therefore useful at this point to briefly review the evolution of school health education and consider the current status of state mandates and teacher training in this area. The second part of this section discusses past approaches to smoking education and specific strategies currently in use.

School Health Education

Evolution of Health Education

Until the early 1960's, few health education courses had been introduced into the nation's primary and secondary school systems. Because the subject of health was not considered important enough to merit separate attention, most students' health instruction was generally limited to assembly programs 1 or 2 days out of the entire school year. Some students were provided with health education only when it could be squeezed into the schedule or when it was integrated into other subject areas such as physical education, biology, or home economics.[57]

In the early 1960's, a number of developments signaled the beginning of a movement by the nation's schools to provide students with more comprehensive health education courses. Broad-based curriculum reform was initiated, and the importance of health education was reexamined by many school administrators. Concerns voiced by parents, legislators, and national health and education organizations about the school's role in health instruction prompted school administrators to develop courses on specific topics such as drug abuse, venereal disease, and cigarette smoking.[58]

However, crowded course schedules, insufficient teacher training, and a lack of administrative and financial support created substantial barriers to the development of comprehensive health education curricula in most school systems. A 1971 report by the President's Committee on Health Education showed that no health education was being offered in a number of schools, and of those programs that were available, many lacked scope, follow-through, adequate funding, and administrative support.[59] A national PTA survey 3 years later revealed that the situation had remained essentially unchanged. School health education programs were characterized by the PTA report as "hit-or-miss" efforts dependent on the interests and abilities of individual teachers. In addition, a lack of effective teaching material and teacher preparation resulted in wide differences in the quality and quantity of health education, even between schools located in the same school districts.[60]

Lack of financial support continues to plague school health education programs. Health education, never firmly established in most curricula, is often one of the last subject areas to receive consideration during the distribution of funds. In many schools that deal with a specific topic such as cigarette smoking, administrators have undertaken their efforts without additional funding or have supported their programs with the assistance of community health organizations and special grants from government or national health organizations.[61]

State Health Education Mandates

A number of state governments have recognized the need for comprehensive health education curricula designed for students at various grade levels, with appropriately targeted activities and materials. Sixteen states have mandated comprehensive health education programs, while others have offered their school districts the option of providing such programs. Still others have mandated a variety of individual areas of health education that, when combined, resemble comprehensive programs. Of all health education subject areas, courses on drugs, tobacco, and alcohol are most frequently required by state legislation. By 1976, 35 states with laws prohibiting minors from smoking on school property also had mandated instruction concerning tobacco; only three states had not made provisions for any area of health education.[62]

Although many states have encouraged the adoption of comprehensive health education programs, some fail to adequately define the term "comprehensive" and others neglect to authorize sufficient funds to enable schools to carry out mandates. For example, a law passed in 1971 by the Illinois state legislature made comprehensive health education a requirement, but before the governor signed the bill into law, he vetoed the portion that provided the funds needed for implementation.[63] Additionally, few schools recognize the need to teach health *behavior* in addition to health *facts*.

A number of state education departments allow loose interpretations of state health education laws, perhaps partly because they realize that schools may not be able to comply with strict mandates if they are not supplied with adequate funding and trained teachers.[64] The result of this "loose rein" policy by the states is that most local school boards actually control health education curricula decisions. In addition, since individual school districts may have policies that take precedence over state laws, local school boards can control curriculum content even in states that wish to enforce strict health education mandates.[65]

Thus, state mandates may be less relevant in determining the availability of health education than the type of curriculum implementation authorized at the school district level. In many districts, the scope and impact of health education programs depend on who is available to teach and what funding is available for salaries and instructional materials.[66]

Teacher Training

Until recently, teachers who had little or no training in health education were often pressed into teaching the subject, and were understandably uncomfortable in their role as health educators. Many physical education and science teachers were able to impart factual information, but lacked the training to teach self-management and behavior change skills. As a result, neither teachers nor students were able to generate much interest in or enthusiasm for the subject.

About 250 universities and other professional training facilities are now offering specialized degree programs in health education[67] and 30 states have mandated that health education be taught by instructors certified in health education. However, 17 of the states still have either no requirement or only general teacher requirements for health educators. In addition, undergraduate elementary-school teacher preparation includes little or no course work in health education.[68] As a result, when health education courses are added to the elementary school curriculum, in-service training is almost always necessary.[69]

On the other hand, in states where health education certification is required, the instructor frequently has had course work in the areas of drug and tobacco education. Generally, the instructor's health education curriculum has also included preparation in personal health, growth and development, health behavior, educational psychology, mental health, group dynamics, anatomy and physiology, as well as training in teaching methods and materials.[70]

In a 1976 survey of public school teachers (grades 1-12) conducted by the American Cancer Society, one of three teachers (32 percent) reported having received training in smoking education. Still, only half of the teachers surveyed felt prepared to do an effective job in smoking education. While a majority of health, physical education, and science teachers felt prepared, a minority of humanities and vocational or commercial teachers thought they could teach smoking education effectively.[71]

A number of recommendations have been made regarding the development and implementation of effective health education programs in the nation's schools. Many of these recommendations directly address improvements in teacher training and certification. The 1979 Surgeon General's Report on Smoking and Health recommends that all prospective elementary school teachers have some preparation in school health education, including the relationship between smoking and health, as part of their pre-service training; that uniform minimal state certification standards be established for the preparation of health education specialists and classroom teachers involved in smoking instruction; and that alternative mechanisms be developed to provide in-service and continuing education training for teachers in health education, with linkages to universities and professional training facilities so that teachers can receive academic credit for special preparation.[72]

Health education specialist S. R. Levy has more specific recommendations regarding teacher training:

1. Administrators should comply with state laws governing health education and hire health educators while allowing physical education teachers and others

to concentrate on their special fields. If administrators do not wish to comply, teacher training may need to be upgraded.

2. Pressure should be brought on state legislatures to fund health education training programs and tighten certification requirements. Health educators, nurses, physicians, school administrators, public health personnel, and college health educators should all be involved in pressing for these goals.

3. Colleges and universities should offer health education as a major subject of study to protect the field from being glutted with students whose primary interests lie elsewhere. The training of health educators must be comprehensive and should include courses in community health and health care, school health, child development, social science, psychology, political science, and economics.[73]

Most health educators agree that what is needed in the nation's schools is an interdisciplinary health education curriculum that includes a comprehensive smoking component.* However, there is currently little effort being made at the national level to implement such a comprehensive approach. There are a number of promising, but limited, approaches to health education being undertaken at national and local levels. Taken together these programs provide a glimpse of what a comprehensive health education program might include. Some of these efforts are described in detail in chapter 4.

In the absence of comprehensive health education mandates, school boards, principals, and teachers will continue to be responsible for integrating various instructional components and creating a health education curriculum that is appropriate for their particular school or school system.[74]

Approaches to Smoking Education

Recent approaches in smoking education reflect the changes in regulations, policies, and attitudes discussed in this chapter. They also are related to the growing recognition of health education as an important area of the curriculum.

Past Approaches

The belief that schools should be responsible for educating students about the effects of tobacco is not a new one: the Women's Christian Temperance Union (WCTU) led a briefly successful crusade against tobacco, alcohol, and narcotics almost 100 years ago. Between 1880 and 1890, legislation was passed in 38 states and territories that required school instruction in physiology and hygiene, including the health effects of alcohol and narcotics. Many of these laws also required instruction about the effects of tobacco on the body.[75] Unfortunately, the WCTU's approach to stamping out alcohol and drugs was reflected in its school instruction component. Students were subjected to moralizing sermons, inaccuracies, and myths, as well as to material that was far too complex to be understood by young people.[76]

Despite its inappropriateness and ineffectiveness, this approach to health education continued to be used in schools around the country for over 60 years. Although the moralizing elements may be toned down today, some schools continue to base their smoking education instruction solely on information about the long-range health hazards of cigarette smoking. This strategy is based on the assumption that if young people know about the long-term effects of cigarettes on their health, they will not begin to smoke. As stated previously, a high percentage of teenagers already believes that smoking is harmful to health, knows it can cause cancer, and agrees that it can cause heart disease.[77]

When students fail to respond to warnings and exhortations about smoking, many educators try to force more facts on them or argue with them about their smoking habits. Recent research indicates that what young people need instead is tactical advice that will help them use knowledge about smoking behavior to overcome the social and psychological pressures to smoke. For example, most young people are aware of reasons for not smoking, but because of the powerful influence of their friends, some find it hard to stay away from cigarettes. They may continue to smoke, not out of ignorance of the health consequences or a lack of motivation to kick the habit, but because they don't know how to overcome the pressures applied by the people who are important to them.[78]

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*For a more detailed discussion of comprehensive smoking education programs, see chapter 3.

Despite the variety of approaches being used around the country and attempts by researchers to evaluate their benefits, much remains to be learned about the kinds of educational experiences that are effective in preventing young people from becoming habitual smokers.[79] Thus, most school smoking education programs continue to be based on what people *think* might work and what seems reasonable to them at the time, rather than on existing programs.

However, even though the process of determining the most effective approaches to prevent young people from beginning to smoke is ongoing, information is available as to the kinds of tactics that *don't* work. Statistics show that past methods such as one-time lectures, isolated smoking films, and sporadic admonitions about the health consequences of smoking have not been useful either in preventing young people from beginning to smoke or in convincing adolescent smokers to change their behavior. Such approaches may work occasionally, when specific conditions such as particularly charismatic speakers enhance their impact. However, they are unlikely to be effective in most situations.

Current Approaches

A number of promising health education programs have emerged in the last several years to help students bridge the gap between health information and the effective use of this information in everyday life. Researchers, educators, and health professionals are working to develop educational strategies and techniques that focus on the complex social and psychological factors that determine whether or not an adolescent will decide to begin smoking, as well as those social and physiological consequences of smoking that deter young smokers from kicking the habit.

These approaches tend to shift away from instruction about the long-range health hazards of smoking toward emphasis on more immediate factors, ranging from short-term health risks to peer encouragement of smoking. Similar educational principals apply to both smoking prevention and cessation programs. Most current smoking education approaches incorporate the following strategies and methods to enhance the effectiveness of smoking education programs:

Encouraging student participation.—Students are given the opportunity to plan, implement, and evaluate classroom activities. By shifting the control from adults to students, young people become more enthusiastic and involved. In addition, these programs attempt to use the power of peer influence to discourage smoking.

Illustrating the immediate effects of smoking.—Students discover firsthand the effects of each cigarette on their own bodies and those of their classmates. They can then make decisions about smoking based on the immediate consequences as well as the long-term effects.

Incorporating smoking into a lifestyle education program.—Many program planners believe that smoking education should be but one element of a total lifestyle-education curriculum. Such a program might deal with drugs, nutrition, and weight control education, as well as coping with stress, interpersonal communication skills, assertiveness training, and how to make effective use of the health care system. The philosophy behind such programs is that teaching young people to cope effectively on a day-to-day basis with multiple pressures will not only alleviate the smoking problem, but a myriad of other problems as well. More and more educators are using values-clarification and decision-making techniques through which students investigate their

own personal values and practice making decisions consistent with these values.

Determining personal health risks.—In programs of this nature, young people are given a personal inventory of their individual health status, including blood pressure, cholesterol level, etc. Their risks of developing different health problems identified through these measures are discussed and compared with those of others their age. After a year or more of practicing healthful behavior, students are able to track their own physiological changes.

Conducting programs in nonschool environments.—Programs are taught at camps, community youth-group meetings, and similar places in order to encourage the kinds of open discussion that might not be possible in a classroom.

An understanding of existing regulation and education programs is crucial when planning a smoking program. However, there are a host of other factors that need to be taken into consideration: integrating smoking into an existing curriculum; identifying and tapping community resources; developing a program suited to the needs of an individual school; and evaluating the success of the program. These considerations, and others, are discussed in detail in chapter 3.

Chapter 3

How to Develop a School Smoking Program

There has never been a better time for school administrators and teachers to develop and implement smoking education programs. The requirement that health education be included in school curricula is more prevalent than ever before, and most states now mandate that cigarette smoking be addressed within health curricula. In addition, many individual teachers have greater flexibility to incorporate worthwhile smoking education components into their courses. These teachers also enjoy greater support from other members of the education community, including school nurses, athletic coaches, administrators, organizations of concerned parents, and ever larger numbers of students, both individually and through their organized groups and clubs.

Organizations outside the school community are also providing valuable support to smoking prevention and cessation programs for young people. Voluntary health agencies such as the American Cancer Society, American Heart Association, American Lung Association, and National Interagency Council on Smoking and Health provide financial or program support to a variety of youth smoking projects. Health professionals are volunteering much needed assistance in the implementation of a number of school smoking programs. And both government and private agencies are supplying funds for research and development of smoking prevention and cessation programs for young people.

Even though there is a great deal of interest in smoking education programs, the process of developing and implementing a school-based program can be a difficult task for school district officials, administrators, or individual teachers. A major concern is how best to develop a relevant, reliable, and effective program in a systematic way, making the most efficient use of existing resources.[80]

This chapter describes some school smoking education activities that can be implemented immediately and with minimal effort, and offers suggestions for adopting programs that require more systematic approaches. Chapter 4 reviews a number of more formal approaches to the school smoking problem, many of which can be easily integrated into the curriculum. Some require only the interest and cooperation of individual teachers, while others demand a greater resource commitment and more systematic program development involving several grade levels.

In the course of program planning, it is important to consider reinforcing a smoking education program with a smoking regulation component. Although this chapter concentrates on smoking prevention and cessation programs, the discussion in chapter 2 about the regulation dilemma faced by a number of schools and the types of innovative responses to the student smoking problem should provide suggestions about ways to develop smoking regulations to support a smoking education program plan.

Teacher as Role Model

One important factor upon which any effective smoking education program must be built is the teacher's attitudes and behavior. Although parents and peers are much more potent role models, teachers do exert an influence on the values and actions of their students; lifelong habits are often acquired during the school years, and are in part dependent on the school environment. A report on smoking among teenagers and young women conducted for the American Cancer Society concluded that "teachers who smoke are essentially promoting and sanctioning

the habit to their students."[81] Teachers may gain or lose credibility depending, in part, on whether they practice what they preach.

A recent study attempted to determine the awareness of the smoking problem among elementary and secondary school teachers, how they viewed their own smoking behavior, and whether they would make changes in their smoking behavior if they believed it would favorably influence their students. Results showed that teachers were aware of their responsibilities, were willing to restrict their own smoking as an example to students, and, by a 5-to-1 ratio, believed that teachers should not smoke where smoking is prohibited to students.[82] Another study, conducted with teachers from the Northampton, Massachusetts, school system showed that teachers' attitudes and behavior toward smoking education were closely related to their own smoking behavior. Ex-smokers were the most active group in attempting to address the smoking issue with their students while the smokers were the least active.[83]

Instructors should carefully consider whether their own smoking or the presence of a faculty smoking lounge is detrimental to the desired impact of school smoking programs. The position statement of the American Association for Health, Physical Education, and Recreation reflects the belief that to be effective in smoking education, the teacher's position must be clear: "It is . . . important to know how you truthfully stand on this vital health issue—what your own personal feelings and attitudes are about smoking. It is essential that your behavior honestly reflect your convictions."[84]

Developing a Supportive Environment

There are many subtle factors present in schools today (as in society at large) that encourage young people to begin smoking. However, it is possible to combat these factors by implementing activities that promote a general school environment that discourages smoking. Most voluntary health agencies have attractive posters and other visual displays that can be used on bulletin boards, in announcement areas, and at other places where students congregate. Printed materials that can be distributed to students in health classes, in the school nurse's office, or in the halls or in assemblies are often available free of charge from national and local government agencies and health organizations.*

The school can also participate in a number of community campaigns that discourage smoking. For example, the "Great American Smoke-out," sponsored annually by the American Cancer Society, is an effort to encourage all smokers to give up smoking for 1 day. This campaign provides numerous opportunities for students to support community events held that day or to plan and participate in school efforts to discourage student smoking.[85] One project might have individual classes competing to sign up the highest number of smokers willing to quit for 1 day. Another might involve enlisting classmates in a smoking cessation clinic offered by a community health organization. Both projects use peer pressure in a positive manner. Local units of the American Cancer Society, American Heart Association, and American Lung Association can often provide suggestions for other projects that will spark student interest and channel their energies to specific smoking-related activities.

In the past, assembly programs have been used to present information on the hazards of smoking. Today, this forum can be used by interested students to present skits on dealing with peer pressure or demonstrating the immediate effects of smoking. Finally, some schools have organized nonsmokers' clubs that sponsor dances and athletic events encouraging peer interaction that is inconsistent or incompatible with smoking. These groups provide a focal point for a supportive school environment.

Integrating Smoking and Health into Existing Courses

Smoking issues can contribute to the curriculum goals of a variety of courses. The traditional smoking-related courses—health education, natural sciences, and physical education—are, of course, the most appropriate places to discuss the immediate as well as long-term health effects of smoking. However, in English, speech, and journalism courses, it is possible to discuss the role of persuasion in cigarette advertising, the techniques by which ads are utilized to present certain positive images associated with smoking, and how these ads portray lifestyles or qualities which are particularly appealing to young people. In psychology, sociology, social problems, and "family life" classes, peer pressure, role modeling, and issues re-

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*See "Additional Resources," page 83.

lated to physical and psychological dependency may be discussed. In addition, the role of government in the development of statutes that restrict smoking, regulate cigarettes, and subsidize tobacco farmers can be used to illustrate points in history, civics, and political science classes. By introducing smoking issues into a variety of subject areas, the messages delivered in health, physical education, and science courses can be reinforced.

Smoking Education Modules

There are several ways in which modules devoted entirely to smoking can be developed within appropriate courses. Most voluntary health agencies have special program packages that include films, handouts, and other visual and printed materials that can be used to help teachers address the issue of smoking. (Examples of these programs are contained in chapter 4.) These programs are usually available at no cost to the schools and range in length from 1 day to several weeks. In addition, health agencies can suggest speakers for classroom presentations.

Teachers who are interested in integrating smoking into curricula may find voluntary health agencies a good source of material. A meeting with the agency's program director prior to, or very early in, the school year can be scheduled to review films and other materials so that the teacher and the program director can integrate smoking education into school courses, ensure availability of the agency's materials, and schedule volunteer speakers in advance.

Several examples of curricular modules are presented in chapter 4. One, developed by the New Hampshire Lung Association, includes a series of experiments that can be undertaken in a general science or health education class to illustrate the immediate effects of smoking. This project and others designed to provide students with "hands-on" experience have been well received by students around the country.

A Comprehensive Smoking Education Program

The activities discussed thus far can be undertaken with a minimum of difficulty by individual teachers or single schools. Each of these activities is important, and can contribute to the development of healthful attitudes and behaviors. However, to address effectively a problem as serious as cigarette smoking, the best approach is the development of a comprehensive system-wide school smoking program which should, ideally, be part of a comprehensive health education curriculum.

A truly comprehensive smoking curriculum focuses strongly on prevention in the early grades and reinforces and encourages students' decisions not to smoke in all later grades. In addition, information and education programs, including smoking cessation services, should be included to help students quit smoking in the upper grades. Implementing such a comprehensive program can be a complex and time-consuming process. However, most health educators believe that, as one component of a comprehensive health education curriculum, this type of program will have by far the most significant impact on young people's smoking attitudes and behavior.

Developing a Plan for a Comprehensive Smoking Education Program

The development of a plan for a comprehensive smoking education program requires the cooperation of many community groups and careful attention to the specific problems and needs of the school system in question. A discussion of the major steps involved in developing such a plan, together with a hypothetical example of a comprehensive plan, follows.

Identifying Interested Groups and Individuals

In developing a comprehensive school smoking program, it is necessary first to identify those local resources that can be tapped to help prepare a program plan. A list should be drawn up of all groups and individuals, both within the school system and in the general community, who are interested in discouraging smoking among young people, and who have the influence to assist in implementing a school smoking program. The list might include teachers of health education, physical education, and science courses; other teachers who are interested in the health of their students; school nurses, athletic coaches, school administrators; school district officials charged wth coordinating health education activities; school board members; parents and parent groups; and individual students and student groups.

Outside the school community itself, individuals and organizations that can provide valuable assistance include voluntary health agencies, public health departments, health systems agencies; fraternal and civic groups; doctors, nurses, dentists, pharmacists, and their professional societies; and perhaps even the fire department.

Each group identified as a possible resource should be contacted to ascertain its interest in helping review potential smoking education programs and developing a plan to be presented to school decision-makers. Although it is not necessary to have every interested element represented on a working group, it is important that each feels it has had an opportunity to express its program concerns. As a result, support from all relevant groups for the final plan will be more easily obtained.

Convening the Working Group and Approaching Decision-Makers

A working group composed of those with the most enthusiasm, time, and expertise in the subject area can be set up to coordinate curriculum development. As soon as the group has been convened and has agreed to participate actively in the development of a school smoking education program, approval should be obtained from the relevant decision-makers within the school system to begin program planning.

These decision-makers include principals and school district supervisors or superintendents, all of whom should already be aware of the existence of the working group, and, ideally, be represented on it. They should be presented with the suggestion that an analysis be undertaken of the current school smoking program, and of potential alternatives and additions to the curriculum that can be implemented to create a more comprehensive health education program. At the same time, it is critical to determine from decision-makers the financial and curriculum restraints present in the school district that would affect smoking education, as these factors set definite perimeters for program development. By obtaining this information and approval at an early stage, the smoking program plan that results from the working group's efforts will have a greater probability of final approval and implementation.

After the "go ahead" has been received, the group can be divided into committees to study the severity of the problem, and review and evaluate available smoking programs. A plan can then be developed that best reflects the needs and interests of students and teachers, within existing financial and administrative constraints.

The review of existing smoking education programs should address the following questions:

- What programs currently exist?
- To which grade levels are they targeted?
- What are the purposes and goals of these programs?
- What resources do they require?
- How effective do they seem to be?

Localizing Problems and Goals

The next step in the development of a smoking education program is a localized description of the problem. Who in your school population smokes? When do they start smoking? What factors, amenable to change, seem to exist within the school environment and within the community that influence the development of smoking behavior? What can be done to alter these factors, and what barriers can be expected?

Chapter 1 reviews current data on adolescent smoking and those factors that influence whether or not young people will begin smoking. Although this information is based primarily on an analysis of national trends, it probably reflects the general situation in most communities around the country. These data may be used to estimate the number of students in the school or school system who smoke, and to become familiar with those personal characteristics and social trends that help predict students who are most likely to begin smoking. Through such local research, a "target population" can be identified for which a smoking education program can be developed.

The working group should then determine its program goals, including consideration of the following factors: (1) existing resources in the school system and community; (2) the mandated charter, as well as the perceived role, of the school in the areas of smoking education and cessation; (3) the feasibility of activities to be considered; and (4) the opportunities for specifically targeting smoking prevention programs to those students most likely to begin smoking.

It is important to determine who will be responsible for curriculum implementation, including scheduling. This determination may not seem very important when smoking prevention activities are being considered, because such programs already have a place in most school curricula. However, because smoking cessation programs may be more relevant and cost-effective outside the school environment, the resources of voluntary and public health agencies should be considered and their commitment determined before including cessation programs in the curriculum.

Developing the Program Plan

After deciding on the specific goals for the smoking education curriculum, the next step is a determination of resources and materials that can be gathered for use in the program. Chapter 4 describes a number of approaches and program materials that can be utilized by local school systems; other resources may be available within the school system or the community. Specific individuals or organizations can be asked to take responsibility for particular elements of the program plan. For example, the local American Cancer Society might be willing to assist in organizing smoking cessation clinics for teenagers. Educational films and other materials may be available without charge from several voluntary health agencies.

The following hypothetical example may help illustrate the form that a smoking education plan might take:

Hypothetical Example of a Smoking Education Plan

The Smoking Education Committee, jointly appointed last year by the PTA and the Woodville Independent School District Board of Supervisors, decided that every student should receive instruction discouraging cigarette smoking. The committee also agreed that a greater emphasis should be placed on this issue during the high school years, when the pressures to begin smoking are greatest. This decision was based, in part, on a survey of Woodville junior and senior high students conducted in social studies classes, which determined that the 10th grade was when the smoking habit began to be adopted by students. The committee also agreed that providing assistance to senior high smokers who wanted to quit was a worthwhile endeavor.

With these factors in mind, the committee reviewed smoking education and cessation programs which had been proven effective in other schools and thus could be introduced into the Woodville school system with a degree of confidence that they would produce desirable results. The committee decided to recommend the following programs to the PTA and Board of Supervisors for their approval and support:*

Program title	*Theme*	*Target grade level*	*Material costs*	*Training costs*
Primary Grades Health Curriculum	General health curriculum	K-3	$1,250/grade	Vary

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*Each of these programs is described in detail in chapter 4, and is used here for illustrative purposes only.

Program title	*Theme*	*Target grade level*	*Material costs*	*Training costs*
School Health Curriculum Project	General health curriculum	4–7	$1,200–$4,000/ grade	Vary
Know Your Body	Health hazard appraisal	6–10	$3–$16/child	$900
Project CLASP	Youth-to-youth counseling	7–8	$5/teacher's manual (cost of duplication, film rental extra)	$150
Biofeedback	Immediate effects of smoking	7–12	$2,225/ unlimited number of students	None
Smoking Cessation Clinic	Assistance in quitting smoking	10–12	None	None

The Smoking Education Committee was aware that the Woodville Independent School District faced a continuing monetary crunch. Because they anticipated some resistance to the costs associated with the smoking education/cessation plan, they took the following steps to reduce costs:

1. The Primary Grades Health Curriculum and School Health Curriculum Projects were recommended for introduction in two of the 12 grade schools in the district during the first year of implementation. Teachers trained to present the curriculum in these schools could then serve as trainers for the teachers in the remaining schools in subsequent years.
2. The Woodville Medical Society and Nursing Association were approached to provide voluntary examiners to assist with the medical screening portions of the Know Your Body health hazard appraisal program. Both groups agreed to provide physicians and nurses for this purpose, and the chairpersons of each organization's Preventive Health Committee were appointed as liaisons to the school district.
3. Project CLASP, a youth-to-youth program to assist junior high students to resist peer pressures to smoke, was presented as a program that would benefit both the junior high students who were the intended audience and the senior high students who served as peer leaders.
4. The local lung association chapter agreed to provide 50 percent of the funds needed to purchase the equipment for the Biofeedback project for ninth graders, and to shuttle the equipment between the four Woodville junior high schools. (Because the Biofeedback project was also considered worthwhile for high school students who would not have the opportunity to participate, the committee recommended that the project be implemented in the two Woodville high schools during the first year, thus, increasing the impact of the project without significantly increasing costs. Thereafter, the project would be implemented only in the ninth grade.)
5. The Woodville American Cancer Society chapter agreed to recruit and train students from the local college to serve as smoking cessation clinic leaders for

senior high students. Both the ACS chapter and a health education professor from the college (who helped recruit clinic leaders) were interested in whether clinics would be more effective if held during or after school hours. Therefore, it was recommended that one high school offer the clinics during lunch hour, while the other offer them after school. The committee requested that the results of this comparison be presented at the end of the first year so that the more successful format could be adopted in both schools the next year.

This hypothetical example is intended to suggest the range of procedures that might be considered in any smoking education/cessation program plan. The example is purposefully ambitious in order to illustrate the varieties of activities that can be implemented at different grade levels. In some cases, where the resultant plan requires implementation of more than one program, it might be advisable to have a timetable for phasing in plan elements gradually. Such a timetable should allow committee input as each program is implemented, which may avoid requiring too much of the group at any one time.

By reviewing currently available programs and resources, obtaining the cooperation of relevant public and private health organizations to help implement the plan, and anticipating (and trying to overcome) any objections that may surface, a plan can be developed that has a greater probability of acceptance by those responsible for curricular decisions.

Submitting the Plan for Approval

When a detailed curriculum plan has been prepared, it can be presented to the decision-makers who approved the formation of the group. School health educators, principals, school district officials responsible for health education, and the school board itself may all be involved in final approval of the plan. If these groups have had the opportunity to actively participate in its development, their approval should be less difficult to obtain. Approval is also more likely if the plan clearly states the individuals and organizations that have agreed to participate in implementation by providing program support, printed materials, films, equipment, volunteer speakers, teacher training, etc.

Implementing the Smoking Education Program

Several steps must be taken in the implementation process. First, the curriculum plan must be reviewed with those teachers, principals, and other administrators who will be responsible for undertaking its various components. To ensure that these people completely understand the program, it should be presented by an individual knowledgeable about both the program content and the implementation plan, perhaps the school district official in charge of health education.

Since teacher training may be necessary, provisions must be made for appropriate in-service training programs, either within the school district or at a regional training center.

Finally, if the curriculum utilizes the resources and materials of various community organizations, a cooperative arrangement must be firmly established among these groups. If each group has a clearly delineated area of responsibility and a timetable relative to those curriculum components that it will furnish, administrative supervision can be kept to a minimum.

Program Evaluation

One vital element in judging the overall success of any smoking education program is the manner in which it is evaluated. Indeed, most program designers think evaluation and implementation of programs go hand-in-hand. Evaluation is part of effective program implementation, not a separate (and expendable) concern.

Teachers are familiar with some evaluation techniques, as virtually everything they do involves periodic student testing to determine whether or not information has been successfully received. Smoking education programs include the presentation of information that students should be able to assimilate and interpret. However, most smoking education curricula also try to influence students' attitudes and behavior, variables that are more difficult to evaluate than the acquisition of knowledge.

Reasons for Evaluation

There are several major reasons for evaluating a smoking education program. The development of smoking education programs for young people is a rapidly growing field, and those school systems that undertake and evaluate their own projects can share valuable information on the success of their program with other school systems around the country. Valid and reliable program evaluations can help others make informed decisions about adopting a program in their districts or states.

Another important reason for seriously evaluating a smoking education program is that almost every program, no matter how well conceived, requires periodic modification. Only by systematically analyzing the accomplishments and shortcomings of the program can meaningful modification be undertaken. For instance, it may be determined relatively early that the interim goals of a program have been accomplished. With an ongoing evaluation, both program content and goals can be changed as the needs of the student audience change.

Finally, any smoking education program, no matter how small, will be reviewed periodically by decision-makers within the school system. If data are available that indicate the program has had a measurable impact on students, these data will sell the program. Especially when budgets are tight, good evaluation results serve as a justification for continuing programs within the school system.

"Process" and "Outcome" Measures

Program evaluations can take many forms. In general, however, a program evaluation should consist of "process" and "outcome" measures. A "process" evaluation, which reviews the steps that were necessary to develop and implement the curriculum, may point out ways in which the procedure can be streamlined in the future. This information can benefit both the particular school system and other school systems that might wish to strengthen their smoking education programs. In a "process" evaluation, certain qualitative research techniques such as small discussion groups and in-depth personal interviews are generally used for gathering information.

Of equal importance is an "outcome" evaluation which seeks to measure the overall effectiveness of the program. Here, too, qualitative research techniques can be used: for instance, interviews can be conducted with a small number of students, teachers, parents, and school administrators to assess reactions to the curriculum. Additionally, quantitative research techniques should be employed to assess attitudes and behavior change resulting from the program. Here, for instance, a program planner may choose to question a representative sample of the student population over a set period of time, using a reliable questionnaire.

Most smoking education programs described in chapter 4 use questionnaires to collect information from young people about their smoking knowledge, attitudes, and behavior. Ideally, a school's smoking education programs should include similar data collection instruments.* Some programs, particularly those that attempt to change smoking behavior, have used more sophisticated evaluation tools. It is now possible to determine objectively whether or not students smoke, rather than relying on self-reports, through devices that measure carbon monoxide in the breath or nicotine in saliva. The equipment necessary to perform these tests is often available through local hospitals or universities. However, the sophistication of these techniques and cost factors necessary to undertake these measurements probably exclude their use in all but a few schools.

Long-Term Evaluation

Most smoking education programs have only been evaluated on a short-term basis. Short-term evaluation can measure student knowledge and attitudes, but it cannot accurately measure permanent behavior change. While smoking behavior change can be determined in the short-run, the results are of limited use because initiation of smoking is occurring throughout the junior and senior high years. In youth cessation programs, recidivism (a return to smoking) may be very high. Thus it is desirable to monitor students for longer periods—i.e., through 1 or more school years—to determine a program's permanent impact on their smoking behavior.

Again, the process of long-term evaluation is not new to teachers. In most subjects, teachers are accustomed to requiring not only weekly quizzes, but also quarterly and final exams. If an evaluation of smoking curricula is viewed in the same way, periodic measures of knowledge, attitudes, and behavior change should seem reasonable.

It is especially important to plan long-term follow-up evaluation for students involved in a comprehensive smoking education curriculum. In a curriculum that often spans a number of grade levels, the final data on smoking-related knowledge, attitudes, and behavior for grade 4, for instance, can be used as the starting point for the next phase of the smoking education curriculum to be undertaken in grade 5.

Most smoking curricula affect several different audiences, and the program's impact on each group should be evaluated. First, participating students should be monitored to determine changes in knowledge, attitudes, decision-making competencies, and behavior, not just concerning smoking, but regarding other health-related behaviors as well. For example, comprehensive health education curricula that focus on decision-making skills, values clarification, and techniques to combat peer pressure should change the way students feel and act about a variety of health-related decisions, including smoking. Thus, it may be desirable to track changes in students' use of alcohol and drugs, and diet and exercise habits as well.

Many school smoking programs also influence the attitudes and behavior of others in the school community such as teachers, support staff, administrators, and decision-makers, as well as some groups outside the system, particularly parents. In addition, if a school program successfully channels the resources and energies of voluntary health agencies and the medical community, it is likely that that program will have a favorable impact on their goals and accomplishments as well.

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*To obtain copies of these questionnaires, contact program coordinators listed in chapter 4.

Comparative Analysis

Most of the evaluation issues discussed heretofore have involved the comparison of changes in the smoking knowledge, attitudes, and behavior of each student or among groups of students. Again, this is similar to the techniques used to measure "educational progress" in traditional academic subjects and most teachers can undertake these evaluations with minimal assistance. However, there are other evaluation efforts that are more involved, but which have potential to be more beneficial in determining program impact. These evaluations involve comparison of alternate smoking education program formats, or of a particular new program with its predecessor (which may be no program), to determine which approach (or approaches) most successfully meets the school system's objectives. Unfortunately, few teachers have been trained to attempt these evaluations.

However, where resources and the availability of trained researchers permit, it is worthwhile for comparative analysis to be undertaken as part of the program evaluation process. Previous educational research has resulted in the development of highly complex program evaluation designs that answer the following question: Did a particular smoking education program change students' knowledge, attitudes, and behavior beyond the changes that would probably take place without the program? One of the few ways to answer this question conclusively is by observing a "control" group of students who did not participate in the program, but who are exposed to all other influences in the surrounding community, so that their behavior can be compared with the behavior of those students who have participated in the program. If a school system is considering undertaking such an evaluation, qualified individuals who can provide assistance in designing and implementing the evaluation can often be found in local college and university departments of education, psychology, sociology, and health sciences.

Most school districts are neither equipped nor interested in undertaking such experimentally based evaluation efforts. In addition, it is often difficult for schools to convince both teachers and parents that their students be assigned to a control group, and thus not be included in a program that is intended to produce positive behavior change. As a result, most evaluations involve a comparison of student knowledge, attitudes, and behavior prior to entering the program, at the conclusion of the program, and at regularly spaced intervals thereafter. While this method is less likely than an experimental design to provide answers to some important questions, it does provide valuable information with which to determine the impact of a smoking education program.

One final issue needs to be addressed when undertaking any form of evaluation. It must be remembered that any single smoking education activity can accomplish only so much, and can be expected to have, without reinforcement, only a limited influence on the student. As a result, it is important to follow changes in knowledge, attitudes, and behavior over time so that necessary reinforcement can be provided when needed. With a comprehensive program—one that offers periodic, sequential, and progressively more targeted information about smoking—the cumulative effect of the program can be demonstrated through ongoing evaluation efforts.

CHAPTER 4

Current Smoking Education Programs

This chapter describes a number of promising smoking education programs that are currently being used in schools around the country. Programs are grouped under general headings that reflect their predominant characteristic. However, since each program combines several approaches, the resulting overlaps make it difficult to fit any program into a rigidly defined category.

The general program categories include:

- youth-coordinated projects
- projects that illustrate the immediate effects of smoking
- youth-to-youth teaching programs
- lifestyle education
- health-hazard appraisal programs
- health education curricula with smoking components
- smoking cessation programs for youth.

In addition, categories are organized in order of the required funds and investment of time. Youth-coordinated projects, which can be implemented with few resources, are described first, while curricula that demand greater funds and more involved implementation procedures are reviewed later in the chapter. Cessation programs, because of their wholly different nature, are described last.

In determining which smoking programs to feature in this report, several questions were considered. Does the program address some primary influences on youth smoking, as these factors are understood? Is the program designed to be easily replicated? Is there some provision for teacher training? Does the program reflect state-of-the-art understanding of health education theory? Is there an evaluation component? Do the data already gathered indicate that the program has promise? Although not all programs elicit "yes" responses to all questions, each seems unique and valuable in its own way. Youth-coordinated projects, for example, are less likely to be evaluated than others. However, because they mobilize student interest and involvement with little or no financial investment necessary, they are judged as important efforts.

Numerous existing smoking programs were rejected from inclusion in this section. Some are eliminated because they employ methods generally considered ineffective, such as one-time lectures or a sole focus on the long-term consequences of smoking. Several programs reach only a small number of students and are designed so that replication in other locations is difficult or impossible. Rather than developing new materials relevant to students' lifestyles and daily pressures, some programs use outdated resources that are unlikely to motivate young people. Finally, there are curricula and peer-counseling programs, claimed to be effective in influencing students' behavior and attitudes regarding smoking, but for which the careful evaluation necessary to substantiate these claims has not been conducted.

One other point should be considered when reviewing the exemplar programs described in this section. Much of the health education research on which innovative programs are based has been undertaken with white, middle-class adolescents. Intervention strategies that work well with this population may not be useful for students of lower socioeconomic status or from other ethnic groups. Recent health education research, including some related to the program efforts described herein, have attempted to determine the efficacy of intervention strategies among different socioeconomic and ethnic groups. However, this has not always been the case, and readers should consider this issue when determining the extent to which a specific program "fits" with an individual school or school system's target populations.

Although the exemplar programs in this chapter are described separately, it is important that planners think in holistic terms when developing their own school smoking education programs. Many of the projects can be implemented simultaneously to strengthen and reinforce the value of each. Approaches used in some programs may spark alternative ideas that better suit a school or community group's needs. Program planners will want to carefully consider the options—weighing costs, other resources required, evaluation results, and the needs of the young people in the community before implementing any program.

Each program described in this chapter has been tried, and in most cases evaluated. A clearer picture of future program trends will emerge as experimentation continues, additional programs are implemented, and more long-range program evaluation is conducted.

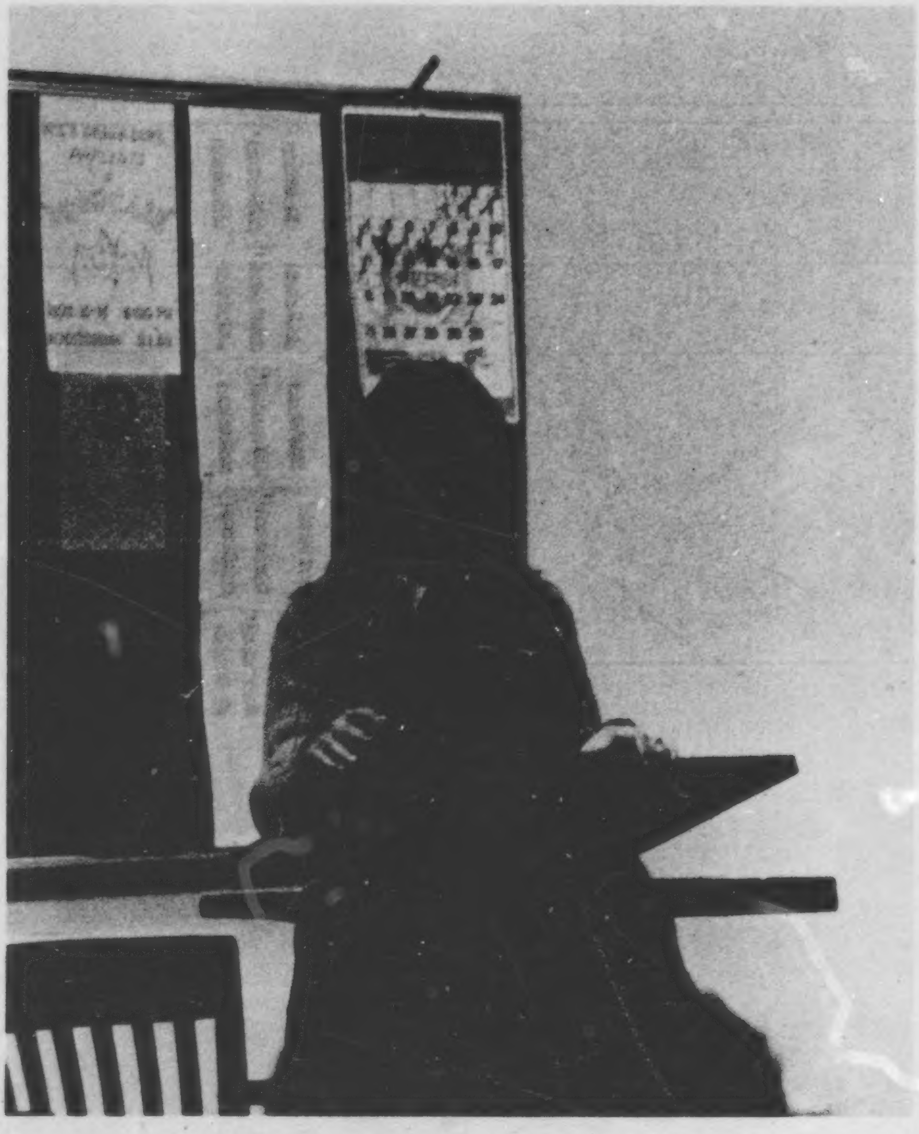
Program planners and administrators can make a valuable contribution to the creation of relevant and effective smoking education programs by supplementing existing projects with fresh ideas and developing new programs where none exist. The wide range of projects described in this chapter provides the foundation upon which future efforts can be built.

Youth-Coordinated Projects

Education can be made more vital and relevant when students are actively involved in creating and implementing their own experiences. "Youth-coordinated projects" is a catch-all title for those programs that give young people an opportunity to develop their own smoking education efforts.

In youth-coordinated projects, students are provided with a framework to guide them in creating their own programs. Projects of this nature may entail some risks not present in most controlled programs, but they are also full of possibilities: the enthusiasm, energy, creativity, and interest generated by young people can have a significant impact on their peers.

Students who are given program development responsibility often feel increased self-confidence, self-worth, and pride in their accomplishments. Youth-coordinated projects encourage students to develop a sense of personal commitment and motivation, qualities that prepare them to make sound health choices for themselves.



Youth Gives A Damn

Youth Gives a Damn (YGAD) is a statewide coalition of California high school students who use after-school hours to work on projects that promote good health for themselves, their families, and their communities. The goal of the program is to give each student a meaningful role and to encourage each to pursue his or her own specific health interests.

YGAD's major project is a series of intensive health camps convened in camping areas and at local "Y's" or similar facilities and attended by several hundred young people. Participants attend a variety of health education sessions, including lectures, films, and panel discussions on such topics as death and dying, sexuality, venereal disease, drug abuse, and cancer. Cigarette smoking is an area of major concern. Sessions run from early morning until late evening, and the total length of the conferences range from 16 to 72 hours. YGAD sponsored six such conferences during the 1978–79 school year. Young people are generally excited by the workshops and are eager to begin YGAD programs in their own communities. Ric Loya, a high school health educator and program coordinator, assists in setting up new chapters.

YGAD created a 305-foot antismoking banner which was carried along California beaches in 1978 and 1979. Approximately 1,000,000 people saw the banner which contained five antismoking slogans. The project was designed and executed by several hundred students. Other projects coordinated by YGAD members include participating in the American Cancer Society's "Great American Smoke–out," leafletting to inform communities of the availability of emergency immunization clinics, and staffing health screening clinics for senior citizens.

YGAD's board of directors is composed of 20 young people under the age of 21 who plan all activities. There are currently 25 YGAD chapters and affiliates throughout California. Some chapters are run as independent entities, while others are coordinated through Key Clubs and other youth leadership organizations. YGAD's objective is to inspire young people to sponsor YGAD-type activities within already existing clubs and groups.

Target: Grades 9–12*

Primary emphasis: Involving youth in the planning and implementation of health education programs that are shared with family and community members.

Materials required: Specific topics are determined by students themselves. Materials required depend entirely on the kinds of projects students design. For example, in organizing health camps, various films and speakers must be brought in.

Cost of materials: Richard Loya, YGAD program coordinator and health educator, estimates his most recent workshop cost approximately $4,200, or about $30 per youth participant. This amount includes conference space, transportation, food, and all speakers, films, etc. Students are asked to pay a $10 fee, and the remaining costs are covered by donations from community groups, voluntary health agencies, and individuals. Low-cost conference space is sought (i.e., Methodist camps, "Y's"), and adult time, including that of the program coordinator, is volunteered.

Teacher training: There is no teacher training per se for the workshops. The program coordinator holds a 2-hour meeting with adult staff (approximately 20 people) about 2 weeks before the conference, primarily to discuss logistics. Adult staff consists of volunteer teachers and graduate students. Health education expertise is not required: the information discussed in workshop sessions is provided by outside speakers and panel members.

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*There is also some participation by junior high students and by college undergraduates who continue their involvement in the program after graduation from high school.

Additional costs: None

Reported effectiveness: The evaluation of YGAD impact on student participants is ongoing. The experimental group consists of 140 youths who were pre- and post-tested at an YGAD health camp. Follow-up questionnaires will be mailed at 1- and 2-year intervals after camp attendance. A control group of 40 high school students not involved in the YGAD program has been established and is being tracked in the same manner as the test group. Preliminary results indicate that there has been an increase in knowledge and in volunteer rates as a result of participation in the program. There also appears to be an increase in the number of students entering preprofessional health programs. Final results of this study will be available in 1980.

History and current use: The YGAD program began in 1969 as an American Cancer Society youth project. At that time, it had one goal: the promotion of antismoking programs. Youth Gives a Damn was not particularly successful until 1971 when students began structuring the program as a comprehensive health education program. Currently there are 25 local affiliates and chapters throughout California. Students as far away as Rhode Island, West Virginia, and Indiana have expressed interest in attending the health conferences.

Funding: YGAD receives funds from local offices of the American Cancer Society, American Lung Association and American Heart Association, Red Cross, County Medical Association, and other civic groups such as Rotary, Kiwanis, PTA, March of Dimes, and many others. In-kind support includes all volunteered time by graduate students from California State University at Long Beach, San Diego, and UCLA as well as adult supervisors for health camps. Funds for the program evaluation are provided by the American Cancer Society.

Contact:
Richard V. Loya
"Youth Gives a Damn"
Huntington Park High School
6020 Miles Avenue
Huntington Park, California 90255
213/583-8239

Virginia Lung Association
Youth Board

The Virginia Lung Association has established Youth Boards in nine regions of the state. These boards operate with an adult volunteer sponsor and include 20 or more young people.

Guidelines and bylaws are supplied by the Virginia Lung Association, but each board develops its own projects and community events to promote cleaner air, better health, and smoking education.

The Youth Board format is highly flexible. There are no restrictions on the kinds of projects that can be undertaken, and adoption of Youth Board programs by schools, community organizations, and clubs is encouraged. Some projects organized by Virginia Youth Boards include:

- health career days
- smoking education presentations to elementary school students
- trips to hospitals
- speakers' contests
- awards to local industries that help clean up the air
- blood drives, dance-a-thons, walk-a-thons, etc., to raise money and educate the community.

The Youth Board has its own board of directors and executive committee to guide the work of the local boards.

Target: Grades 9-12

Primary emphasis: To promote youth awareness of social, environmental, and medical problems known to cause, intensify, and aggravate lung disease.

Materials required: Youth Boards use guidelines, educational material, and films provided by the lung association.

Cost of materials: All materials used by the Youth Board are provided free of charge by the local lung association.

Teacher training: Sponsors are trained by regional lung association directors for 1 or 2 days, in 2-hour sessions.

Additional costs: Once a year, two youth representatives from each board meet at a state conference. Transportation, lodging, and meals are provided. Other costs depend on specific projects planned.

Reported effectiveness: Progress reports are submitted annually by each Youth Board summarizing the year's activities. No evaluation has been conducted regarding attitudinal or behavioral changes among Youth Board participants or the audiences for their activities.

History and current use: Originally developed by the Lung Association of St. Joseph's County, Indiana, the Youth Board format has been used in Virginia since 1968.

Funding: No outside support.

Contact:
Virginia Bloch
Virginia Lung Association
311 South Boulevard
P.O. Box 7065
Richmond, Virginia 23221
804/355-3295

Other Youth-Coordinated Projects

Doggone Excuses People Make for Smoking—Boys' Club of Camarillo, California

Projects of this Boys' Club have included a campaign to educate the community about smoking through humorously captioned photographs, experiments that demonstrate the immediate effects of smoking, and a film produced by young people that focuses on people's excuses for smoking. The club's members range in age from 5 to 21. Smoking activities are ongoing. Estimated expenses: $100 for campaign; $60 for experiments; $1,000 for film production. Contact Shigeru Yabu, Boys' Club of Camarillo, P.O. Box 231, Camarillo, California 93010, 805/482-8113.

Toward a Smokeless Generation: An Antismoking Program in Selected St. Louis Area Schools—St. Louis University Medical Center

This program uses several approaches to prevent the onset of smoking and assist smokers in quitting among seventh and eighth graders in four St. Louis schools. Teams of three to four medical students or other volunteers who can establish rapport with adolescents consult with young people in planning, implementing, and evaluating programs of their choice. The junior high school populations vary in socioeconomic status and racial composition; specific programs are designed to appeal to students from various backgrounds. Discussion groups and role playing sessions focusing on the issue of peer pressure influences and the importance of the media and advertising in determining smoking habits have been the most popular themes. A financial incentive is offered in the form of money, prizes, or other student-chosen alternatives to encourage active participation. In addition, families of students in the program are encouraged to attend meetings and discuss their role in their children's smoking decisions. Costs depend on projects chosen by students (i.e., production of a slide program on smoking). This program is implemented once a week in 50-minute sessions over an 8-week period. Contact Jerome Cohen, Department of Community Medicine, St. Louis University School of Medicine, 1320 S. Grand Boulevard, St. Louis, Missouri 63104, 314/664-9800, or E. B. Fisher, Jr., Department of Psychology, Washington University, St. Louis, Missouri 63130, 314/889-6527.

Pregnant Adolescents and Smoking—University of Minnesota

The purpose of this project is to assist pregnant teenagers to learn about the risks of smoking to their babies and themselves, to evaluate these risks, and—ideally—to decide to become or remain a nonsmoker. Youth participants range in age from 13 to 19, and are drawn from several community youth groups. The program plan emphasizes the importance of participants' choosing their own materials and activities. During the 8-week span of the project in 1978-79, various groups of young people produced videotapes on smoking; developed a comic book for fifth graders; participated in smoking cessation clinics; and designed posters, slide shows, and collages. Most smoking materials used are provided, free of charge, by voluntary health organizations and government agencies. Costs are incurred in providing transportation and babysitting services to participants, paying small fees to young people for attending sessions, and for rental of a few films. Contact Donald Compton, University of Minnesota, Center for Youth Development, 48 McNeal Hall, 1985 Buford Avenue, St. Paul, Minnesota 55108, 612/376-7625.

Illustration of Immediate Effects of Smoking

A major new approach to school smoking programs is the demonstration of the immediate effects of smoking on the body. This approach has been developed to address a primary obstacle to the success of smoking education programs designed for young people: the difficulty of appreciating the long-term health consequences of cigarette smoking. If student smokers are shown that each cigarette they smoke causes negative body reactions, such as manual unsteadiness, increased carbon monoxide in the breath, and heightened pulse rate, they may be more likely to understand the cumulative damage of smoking. As a result, students may be more motivated to quit smoking, or to avoid the habit entirely.

The New Hampshire Lung Association's Biofeedback program described in this section focuses on demonstrating to students the immediate effects of smoking. Procedures developed by this project are being incorporated into smoking education programs of all types, including lifestyle education and youth-coordinated projects.

New Hampshire Lung Association
Biofeedback

This project emphasizes smoking's immediate effects on the body. Using a carboximeter to measure the amount of carbon monoxide in the breath, a digital heart rate monitor to measure pulse rate, a digital thermometer to measure skin temperature, and a homemade "tremor tester," students can see firsthand how cigarettes impair manual control, increase pulse rate, lower skin temperature, and increase carbon monoxide in the breath.

The equipment is delivered to a school on Friday afternoon by a staff member of the lung association. Approximately 2 hours are spent training the science teacher to use the equipment and providing information on smoking.

The following week, students spend 50 minutes each day in an appropriate science class discussing the scientific method as the basis for the week's experiments, reviewing the long- and short-term effects of smoking, and using the equipment. Data are collected on smokers before and after smoking a cigarette (parental permission is required). Nonsmokers are also tested twice, serving as controls. In the final period of the week students present the data, draw conclusions, and relate findings to general health considerations. The teacher provides additional information on physiology and smoking. A lung association staff member returns to pick up the equipment and delivers it to another school at the end of the week.

Target: Grades 7-12

Primary emphasis: Stimulating a positive change in students' smoking behavior and attitudes, and reinforcing the behavior and attitudes of nonsmoking students, through a demonstration of the immediate effects of smoking.

Materials required:

Ecolyzer® (purchased through ETA Associates, P.O. Box 13, Newton, Massachusetts 02195)
CardioTach® (purchased through GW Applied Science Lab, Waltham, Massachusetts 02154; TM Series 4600 pulse rate monitor)
Digital thermometer (purchased through Cyborg Corporation, 342 Western Avenue, Boston, Massachusetts 02135)
Tremor tester (designed by local consultant; construction plans available through New Hampshire Lung Association)
Handout information sheets for each piece of equipment (separate sheets for students and teacher)
Data collection sheets
Student permission slips (available from New Hampshire Lung Association)
Cigarettes

Cost of materials:

Ecolyzer®[*]	$1,200
CardioTach®	500
Digital thermometer	500
Tremor tester (parts)	25
	$2,225

NOTE: This equipment need not be purchased. It may be borrowed from a local university, hospital, or other facility with medical supplies.

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[*] A less expensive alternative to the Ecolyzer® is available for approximately $400 from Catalyst Research Corporation, 1421 Clarkview Road, Baltimore, Maryland 21209, 301/296-7000, Attention: Jerry Olson or Howard Goldman. This instrument is not calibrated as precisely as the Ecolyzer®.

Photograph courtesy of the Christmas Seal League of Southwestern Pennsylvania

Teacher training: Teacher training for this project is provided by a New Hampshire Lung Association staff member who trains teachers in the use of the equipment and provides general smoking information just prior to the implementation of the program. However, if this program is not available through the local lung association, teachers may use printed material from ALA, and be trained in the use of the equipment by any experienced individual.

Additional costs: There are costs involved in transporting the equipment from school to school.

Reported effectiveness: An evaluation conducted among 803 students in the experimental group and 488 students in the control group indicated that the program was effective in convincing smokers to quit. Of the 167 smokers in the experimental group, 47 (28.1 percent) had quit smoking after participation in the program. Of these, 32 (19 percent) remained ex-smokers at the 6-month follow-up. Of 82 smokers in the control group, none gave up smoking during this 6-month period. In addition, 13.7 percent of smokers in the experimental group switched to cigarettes lower in tar and nicotine, compared with 1.2 percent in the control group. Further evaluation of knowledge and attitudes indicates that the program had a positive effect on participating students.

A survey of the experimental and control populations will be continued over a 5-year period at 12-month, 24-month, and 60-month intervals.

History and current use: The Biofeedback project was developed and piloted during the 1977-78 school year in the state of New Hampshire. Lung associations in Atlanta, Georgia and Norfolk, Virginia, have adopted the program.

Funding: Provided by the National Interagency Council on Smoking and Health.

Contact:

Steven P. Smith
New Hampshire Lung Association
456 Beech Street
Manchester, New Hampshire 03101
603/669-2411

Other Projects That Demonstrate the Immediate Effects of Smoking

Smoking and Carbon Monoxide—American Lung Association of New York State/Blue Cross of Northeastern New York

This program is designed to acquaint students with the health hazards of carbon monoxide. The instructional package provided is self-contained, including instructions, activities, student self-tests, and overall program objectives. The program may be conducted in 3 to 5 days. Costs: purchase of Ecolyzer® carboximeter.* Contact W. Ray Williams, American Lung Association of New York State, 8 Mountain View Avenue, Albany, New York 12205, 518/459-4197.

Putting Your Heart into the Curriculum: A Guide for Teachers and Youth Workers—American Heart Association

This activities guidebook contains listings of 24 different experiments that can be used to demonstrate such things as effects of smoking on heart action, flow of blood through blood vessels, and accumulation of tar deposit on a smoker's air passages. Contact your local heart association or Betty Tevis, American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231, 214/750-5300.

Smoking and Health Experiments, Demonstrations, and Exhibits—Office on Smoking and Health

A revised and expanded version of an earlier publication by the same name. Material is compiled from various teachers' guides to help students prepare smoking demonstrations and exhibits. Parts I and II describe experiments, divided by grade level; part III lists demonstrations; part IV contains suggestions for exhibits. Order from Office on Smoking and Health, Park Building, Room I-58, 5600 Fishers Lane, Rockville, Maryland 20857.

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*See note, page 41.

Youth-to-Youth Teaching

Youth-to-youth smoking education programs are based on two assumptions: that adolescents are primarily influenced in their attitudes and behavior by peers rather than adults; and that since peer pressure to smoke is so strong, nonsmoking peer leaders can be used to counter this powerful negative influence.

Cross-age programs use older students to work with younger school children. High school leaders are chosen because they are respected and admired, and present a positive, nonsmoking role model.

Peer-led programs train young people to provide support and encouragement to others their own age who are attempting to quit smoking, and to make presentations to their nonsmoking classmates to deter them from taking up the habit.

In both cases, programs are designed so that young people will see their nonsmoking peers as exemplars. Peer counselors are trained in such communication skills as group presentation, role playing, and counseling techniques, and the counselors themselves have an opportunity to develop an increased sense of self-esteem and pride in their work.

A crucial issue in youth-to-youth programs is the criteria for the selection of leaders. Some peer leaders are selected by the principal because of their ability to speak before a group, their academic record, or their ability to perform laboratory experiments. Others try to select leaders whom they believe students regard as popular, mature, independent, and attractive.

Project CLASP, a cross-age program described in this section, makes the following recommendations:

> When selecting peer leaders to conduct programs dealing with values and personal behavior, it is vital to select a diverse group of leaders. If selection is entirely determined by a single person or group, leaders may represent less than the complete spectrum of student groups. In dealing with cigarette smoking, there is a tendency for the students who volunteer to help adults counsel young potential smokers to have different values and attitudes from those who need leadership the most. Unless a diverse group of students belongs to the peer leader team, the young people who are most susceptible to pressures to smoke may be "turned off" and not attend seriously to the program.
>
> The recruitment and selection (for Project CLASP) . . . has been designed to ensure diversity among the peer leaders. It includes two processes: (1) vigorous publicity and promotion activities intended to attract the maximum number of volunteers and to reach individuals who may be particularly good for the program; (2) a flexible, but objective, system for *selection* of the peer leaders from the pool of volunteers, which ensures varied types of students in the team that is chosen.

The concept of youth-to-youth counseling addresses one of the major influences in the development of young people's smoking attitudes and behavior. When combined with other methods and incorporated into comprehensive smoking education programs, youth-to-youth counseling can help young people resist peer pressures to smoke.

Wisconsin Lung Association

Students Teaching Students

The Students Teaching Students counseling program features high school volunteers who make presentations to fifth and sixth graders in their community about the pros and cons of smoking.

Nonsmoking high school student counselors are chosen by a faculty member and are trained after school for five 1-hour periods by local high school student teachers who volunteer their time. Training consists of discussions of the effects of smoking on the body, how peer pressure influences youth to smoke, the history of tobacco, and instruction on how to answer grade schoolers' questions.

On the first day of the classroom presentation, a film is shown that describes basic lung physiology and the effects of smoking. The second day a team of high school students conducts a slide presentation. A smoking robot and a question and answer period are also presented, covering such topics as the history of tobacco, smoking ads, peer pressure, and the cost of smoking. Students are given a package containing puzzles, posters, and letters to take home to parents who smoke.

Target: Grades 5-6

Primary emphasis: Teaching the physiology of the respiratory system, diseases caused by smoking, and factors involved in decision-making.

Materials required: American Lung Association film, "Breathing Easy"; flip chart and slide show (produced by Wisconsin Lung Association); package of materials for students, teachers, high school counselors (produced by Wisconsin Lung Association).

Cost of materials:

Film purchase price (can be borrowed at no charge from local lung association)	$165.00
Robot (from Spenco Co., Box 8113, Waco, Texas 76710)	13.00
Flip chart	15.00
Slide show	15.00
Kit (each child)	.33
Teacher's folder (each)	1.00
High school counselor packet (each) (samples available from Wisconsin Lung Association)	1.00

Teacher training: Teachers are given resource folders containing posters, smoking and health information, and suggested classroom activities. Additional resources may be obtained from the local lung association.

Additional costs: Additional costs may be incurred transporting high school students to and from elementary schools.

Reported effectiveness: In the 1976-77 school year, pre- and post-tests of 17,864 fifth and sixth graders throughout Wisconsin showed an average improvement of 50.3 percent in knowledge of anatomy and physiology of the respiratory system, effects of smoking, and factors affecting a decision to smoke. There was no control group in this evaluation. Pretests were administered by high school students. Research is planned to measure behavior change when groups reach high school.

History and current use: Originally developed in 1975, this program continues to be used throughout the state of Wisconsin. There are plans for its adoption by the American Lung Association of Southeast Florida.

Funding: No outside funding sources.

Contact:

Fran Elliott
Wisconsin Lung Association
1701 W. Wisconsin Avenue
Box 424
Milwaukee, Wisconsin 53201
414/933-1161

Stanford Heart Disease Prevention Program
American Lung Association of Santa Clara
and San Benito Counties, California

Project CLASP

Counseling Leadership About Smoking Pressures

Project CLASP is a cross-age counseling program in which college graduate students teach high school students to work with seventh and eighth graders to promote understanding of and resistance to social pressures to smoke.

The program is divided into two parts:

1. Graduate students work with high school health education classes, presenting slides, discussions, and demonstrations of the immediate effects of smoking on the body. High school counselors for the junior high school education program are identified in these sessions.
2. High school counselors lead a series of workshops for seventh and eighth graders. Leaders show films and slides and facilitate discussions, role playing activities, skits, and dialogues. Students practice several methods of resisting pressures to smoke.

High school counselors are chosen by a student/teacher steering committee if they are considered viable role models, if they are nonsmokers, and based on their reasons for wanting to join the program. Counselors are then trained in two 2-hour afternoon workshops led by a group of teachers and students from Stanford University's Heart Disease Prevention Program. Sessions focus on the health effects of smoking, role playing and counseling techniques, and ways to control and stimulate discussion.

Nine days of class time are required for this program. High school counselors meet with junior high students for 3 consecutive days during the third week of school. One-day follow-up sessions are held in late October, early December, late January, early March, late April, and early June to reinforce concepts learned in September. During these follow-up meetings, junior high students describe the pressures they have encountered to smoke and the methods they have used to deal with these pressures.

A comprehensive set of materials is being developed to facilitate future replication of CLASP programs. The materials will include instructions for selection and training of youth counselors, curricula materials for classroom use, and evaluation guidelines. These materials will be available through Cheryl Perry, project coordinator (see below).

Target: Grades 7-8

Primary emphasis: Prevention of smoking through understanding of and practice in resisting social pressures.

Materials required:
Films: "Trying Times" and "Too Tough to Care" (available through Agency for Instructional T.V., 1670 Anaphelt, #306, San Mateo, California 94402)
Curriculum guides
Questionnaires for selection of team leaders
Slides, student scripts
Pre- and post-evaluation sheets
Recruitment posters, buttons
Instructions for contacting school systems
Guide for selection of peer leaders and questionnaires
Guidelines for maintaining peer leaders' interest
(available through Cheryl Perry)

Cost of materials: $5.00 for curriculum guide. Additional materials extra.

Teacher training: Project staff from the local lung association and Stanford University train teachers prior to the start of the school year. The curriculum is reviewed, recruitment techniques are discussed, and the peer leader training process is presented. Training is optional and takes between 6 and 8 hours.

Additional costs:

In-service workshop for teachers	$150.00
Peer leaders' expenses (bus, lunches, snacks, etc.)	200.00

Additional expenses might be incurred for compensation for teacher training time, as well as duplication of materials and purchase of films.

Reported effectiveness: Evaluation conducted with junior high students at the completion of the 1978-79 school year showed 3 percent reported weekly smoking in the experimental group, compared with 10 percent and 12 percent in the control groups. In addition, when asked "Have you smoked in the past month?" 5 percent of the experimental group answered affirmatively as opposed to 19 percent and 18 percent in the control groups.

History and current use: Project CLASP was piloted in four schools in San Francisco in 1977-78, and has continued. Current schools involved are Redwood Junior High, Saratoga High, Mountain View High, Los Altos High, Monterey High, Salinas High, Fremont Junior High, and Washington Junior High, all in the San Francisco Bay area. A total of 1,450 students were reached in 1978-79.

Funding: Support for this program has been provided by the National Interagency Council on Smoking and Health, and the National Institute of Child Health and Human Development (Department of Health and Human Services).

Contact:

Cheryl Perry
Stanford Heart Disease Prevention Program
Stanford University
Stanford, California 94305
415/497-0962

Other Youth-to-Youth Projects

Cross-Age Smoking Intervention Program—Rhode Island Interagency Council on Smoking

This program brings high school students into fifth grade classrooms to educate younger students about health hazards of smoking and to assist these children in developing decision-making skills. Interested students work with a teacher, the school nurse, or other faculty members. Active high schools hold regional meetings to interest other schools in their area and help them begin their own programs in cooperation with the Interagency Council on Smoking. Two sessions are conducted: one includes the history of tobacco and the hazards of smoking; the other deals with adolescent pressures and coping mechanisms, i.e., values clarification and decision-making. The Interagency Council on Smoking supplies films, slides, games, life-size smoking mannequins, etc. Fifteen weeks of training are available through the Cross-Age Smoking Intervention Program at an estimated cost of $65 for materials. Four-part training sessions are available at a reduced cost. Contact Frances Driscoll, Rhode Island Interagency Council on Smoking, 40 Broad Street, Pawtucket, Rhode Island 02860, 401/728-4120.

"I'll Never Smoke—I'm No Sucker" (INS) Project—American Lung Association of Iowa

High school students make presentations to elementary school students on the hazards of smoking, decision-making, and values clarification. Initial training takes approximately 4 hours; presentations may be made in one classroom period. Materials are available free through Barbara Eggen Engel, American Lung Association of Iowa, 1321 Walnut Avenue, Des Moines, Iowa 50309, 515/243-1225.

Student Service Center—Miami Valley Lung Association, Ohio

Students make classroom presentations to their peers, and youth counselors assist peers in smoking cessation. Student counselors are trained over a 9-week period (1 hour each week) and presentations may be made in one class session. The Student Service Center estimates it spent $1,000 on transportation, audiovisual equipment, duplication of materials, and office supplies. Contact: Cathleen E. Kreiner, Cincinnati Institute of Justice, 222 E. Central Parkway, Cincinnati, Ohio 45202, 513/421-3900 or Fred Nathanson, Miami Valley Lung Association, P.O. Box 902, Dayton, Ohio 45401, 513/222-8391.

Lifestyle Education

Lifestyle education describes the growing trend toward a holistic approach to smoking education, in which students learn and practice types of behavior that can be used in many areas of their lives. Smoking is treated as one of the many behaviors that young people can learn to resist.

These programs apply a number of smoking education approaches to other subject areas, and in some instances, an attempt is made to totally restructure the school environment. The Sunflower Project, for example, uses lunch periods to teach nutrition and free periods for exercise classes, and integrates health information into every aspect of school life.

Through role playing, group discussion, participatory games, and exercises, students are taught to develop greater independence, self-esteem, and self-confidence, and then to make their own decisions with conviction. Proponents of the lifestyle education approach claim that a decision not to smoke, made when a student is self-confident and self-aware, has the best chance of lasting a lifetime.

Although these skills are being taught in a variety of smoking education programs, the Sunflower Project and Life Skills Training program described in this section make lifestyle education their central focus.

American Health Foundation

Life Skills Training

Life Skills Training is a pilot program that focuses on teaching young people the skills they need to deal with their day-to-day problems. The subject of cigarette smoking is addressed within the larger context of basic life skills.

The program uses a workshop format that combines group discussion and special skills training. Sessions are held once a week for 15 weeks, and the subjects include smoking myths and realities, advertising techniques, communication and dating skills, self-image and improvement, decision-making, coping with anxiety, and assertiveness training. Videotapes, produced by students, are used to stimulate discussion and generate role playing activities.

High school students administer the program. The current pilot project uses seven teams of one boy and one girl each, who conduct the program in seven eighth-grade health education classes.

Target: Grade 8

Primary emphasis: Teaching young people life skills that will help them to solve day-to-day problems.

Materials required:
Group leader's manual
Audiovisual package: videotape, audiotape, slides
Student workbook (available from the American Health Foundation)
Biofeedback equipment: Ecolyzer®, Cardiotach®, Tremor tester*

Cost of materials:

Manual	$10.00
Audiovisual package	50.00
Student workbook (per student)	2.00
Biofeedback equipment*	

Teacher training: High school leaders are trained in a 1-day session by American Health Foundation staff members. The workshop provides students with a brief overview of the problem of teenage smoking, and discussion, demonstration, and participation in various program activities. In addition, weekly meetings are held to familiarize group leaders with the specific course content of the upcoming session.

When the program is replicated, adult teachers may serve as group leaders. Training for these teachers is optional, and takes between 6 and 8 hours.

Additional costs: If a school opts for teacher training, additional costs will be incurred, although the exact price of training has not yet been determined. Transportation of high school leaders to junior high schools also adds costs.

Reported effectiveness: The first phase of this pilot, conducted in 1977-78 with eighth to tenth graders, has been evaluated. Results indicated that significantly fewer students in the experimental group began smoking during the course of the program than students in the control group: only 4 percent of the test group began to smoke, while 14 percent of the control group did so. The program seemed to be most effective among eighth graders, and less effective among tenth graders. Results also showed an increase in self-control among ninth grade girls, and a decrease in social anxiety among eighth grade boys. No significant changes were noted in these areas in the control group.

The second phase of this pilot will also be evaluated. A total of 400 eighth graders in the experimental and control groups will be pre- and post-tested to assess smoking status, knowledge, and several psychosocial variables. In addition, an Ecoly-

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*For information on how to purchase or borrow this equipment, and specific costs, see Biofeedback project on page 41.

zer® carboximeter will be used to increase the accuracy of self-reports. The projected effect of this smoking program is a 50 to 60 percent reduction in the number of students beginning to smoke regularly. In addition to smoking status, changes in knowledge and attitudes among the experimental and control groups will also be compared.

History and current use: The Life Skills Training program has undergone two pilot phases. The first was conducted in the 1977-78 school year in Westchester County, New York. Pilot testing of the second phase is now underway in the same location.

Funding: Funding for the initial pilot was provided by the National Cancer Institute (Department of Health and Human Services). The National Interagency Council on Smoking and Health funded the 1978-79 pilot.

Contact:
Gil Botvin or Anna Eng
American Health Foundation
320 E. 43rd Street
New York, New York 10017
212/953-1900

Trailwood Elementary School, Shawnee Mission, Kansas

Sunflower Project

The Sunflower Project is a total health education program designed to develop lifestyles that will decrease the risk of disease. The project consists of a screening component to determine individuals' risk factors, a health education curriculum for the classroom, a physical fitness program for students and their families, and a lunchroom nutrition program.

Each student is tested for aerobic capacity, body composition, blood chemistry, resting heart rate, blood pressure, pulmonary function, and other potential health risk areas. Families of these youngsters may also participate in the screening. Students are tested at the beginning and end of each school year and results are discussed with the families.

Students are given 5 hours of health education each week throughout the year, covering topics such as nutrition, fitness, cardiorespiratory health, environmental pollutants, and smoking. Specific smoking activities include units on the respiratory system, effects of smoking on the lungs and heart, and discussions with smoking and health experts. Family fitness sessions are held each morning to encourage parents and siblings to exercise together. One recess per day is used as a fitness break for students. Young people are given the opportunity to visit with health professionals in such fields as exercise physiology, motor development, and nutrition.

In addition, students participate in lunch menu selection, and may choose between standard school meals and low-fat, low-sugar variations. Following their nutrition instruction, many students choose the more healthful items.

Target: Grades K-6

Primary emphasis: Teaching young people to develop appreciation for lifestyles that minimize the risk of heart and lung disease.

Materials required: A wide variety of instructional aids: films, filmstrips, anatomical models, etc.

Cost of materials: Most materials are acquired free from local voluntary health organizations, although a few films, filmstrips, and models are purchased. The biggest costs are those incurred in duplicating printed materials for all students.

Teacher training: Procedures for teacher training are currently being designed. It is likely that Donna Osness, project coordinator (see below), will be available as a consultant to help school districts identify individuals and resources in their own communities who may provide training.

Additional costs: The Sunflower Project's extensive screening component would have been expensive if professional staff from the University of Kansas had not volunteered their time.* Additional costs may be expected for the extra teacher time required (i.e., chairing meetings with parents, leading early morning exercise sessions).

Reported effectiveness: An extensive evaluation is being conducted, using 400 students in the experimental group and 200 in the control group. Tests will measure cognitive aspects of the project as well as trends in physical fitness and changes in risk factors.

Preliminary results indicate that the Sunflower Project has had a number of positive effects on participating students. Physical screenings reveal significant differences in health status between students in the experimental and control schools. Students were tested in such areas as resting heart rate, hemoglobin

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*For information on reducing the costs of health screening, see Know Your Body program on page 57.

count, and ability to complete a 12-minute run/walk. In addition, assessments of cognitive knowledge administered to exiting sixth graders revealed significantly higher scores among students in the experimental school. Participating sixth graders will be tested again when they reach eighth grade to measure retention levels.

Complete evaluation results will be available in late 1980.

History and current use: The Sunflower Project is a 3-year pilot, in operation since 1977 at Trailwood Elementary School in Shawnee Mission, Kansas.

Funding: Funded by Kansas affiliates of the American Heart and American Lung Associations, as well as the local school district. Medical professionals from state and local health agencies, University of Kansas Medical School and Department of Health, Physical Education, and Recreation, volunteered time.

Contact:

Donna Osness
Mohawk Instructional Center
6649 Lamar
Shawnee Mission, Kansas 66204
913/384-6800

Other Lifestyle Education Programs

Assertiveness Training and Smoking Education—Department of Health Education, State University of New York at Buffalo

The objective of this program is to utilize assertiveness training to prevent the initiation of cigarette smoking among adolescents. The model is comprised of 15 consecutive lessons. During the first nine lessons students are taught body language, voice control, and the characteristics of assertive, aggressive, and passive/aggressive behavior. Students model and practice these new behaviors, and examine and evaluate the behavior of classmates. The four smoking lessons concentrate on the short-term effects of cigarette smoking. The first and last lessons are reserved for measurement and evaluation purposes. This program was piloted with seventh grade students during the 1977–78 school year. The program manual contains detailed lesson plans, role playing skits, and discussions, as well as evaluation instruments. Estimated cost of materials: $20. Contact Linda Del Greco or Linda Breitbach, Department of Health Education Professions, Seventh Floor, Stockton-Kimball Tower, State University of New York at Buffalo, Buffalo, New York 14215, 716/831-2341.

A Counselor's Guide to Teaching Health Education in a Resident Center Setting—Frost Valley YMCA Camp, Conference and Educational Center, New York

The objective of this program is the development of a camp health manual, *Building Wellness Lifestyles: A Counselor's Manual*, to be used as the guidebook for a prevention-oriented health program. Adolescent and young adult staff of the Frost Valley camp are trained to help campers, ages 7 through 16, choose smoke-free lives. Other aspects of the program include nutrition education, fitness building, stress management, and environmental sensitivity. Young people practice decision-making skills, values clarification, and other activities designed to increase self-esteem and responsibility. The program is conducted over a 1- to 2-week camping period in a relaxed, outdoor environment, and is designed to be easily replicated in other summer camp settings. Costs of implementation have not yet been determined. For further information, contact Michael Ketcham, 298 Claremont Avenue, Montclair, New Jersey 07042, 201/744-3488.

Health Hazard Appraisal

Health hazard appraisal programs are designed to determine an individual's health risks before disease occurs. After a series of physical screenings, individuals are not only informed of their risks, but also of specific behavior changes they may make to reduce those risks.

School health programs in this category focus on informing young people how their smoking, diet, and exercise habits affect their blood pressure, cholesterol levels, and the heart's response to strenuous exercise, and how these factors can result in increased risks of cardiovascular disease and/or cancer. Students are taught the relationship between disease risk factors and personal health behavior and how they can lower their risks of disease by making positive health choices.

Over the course of a year or more, students are able to monitor how their risk factors are affected by modifications in smoking, diet, physical exercise, and other lifestyles. Ideally, changes in health behavior are reinforced when risk factors decrease; young people are encouraged to begin forming health habits that they will carry into adulthood.

A potential drawback to the implementation of health hazard appraisal programs is that physical examinations are essential; thus medical staff must be involved. However, in most communities, volunteers can be recruited from the local nursing and medical associations, board of health, or a nearby university.

Photograph courtesy of the American Health Foundation

American Health Foundation

Know Your Body

Know Your Body (KYB) is a curriculum enrichment program that can be integrated into an existing health, science, home economics, or physical education course, or can stand alone as a 10-week course. The KYB design has three components: health screening, the return of screening results directly to students, and a health education and intervention program. Once a year, a team of registered nurses and medical technicians visits a school and screens individual children for blood pressure, blood glucose and cholesterol (sugar and fat levels), hematocrit (test for anemia), height and weight, and the heart's response to challenging exercise. Students must have parental permission, and a student assembly is held before the screening to demonstrate tests. After the screening, students receive "health passports" in which they inscribe their risk factor scores, with space for annual entries, and a booklet explaining normal values for each test.

The curriculum material that follows the screening is divided into eight units: risk factors, smoking, fat in the diet, blood pressure, physical fitness/exercise, primary cancer prevention, and two units on nutrition. Each unit contains goals, concepts, objectives, suggested learning activities, resources, and a bibliography.

The Know Your Body teacher's guide provides detailed information, including overall philosophy, details of prescreening procedures, aids for answering students' questions, a sample teacher workshop program, glossary of terms, and questionnaires for evaluation. A smoking intervention project developed by the American Health Foundation entitled Life Skills Training is currently being operated as an independent pilot and will ultimately become a part of this program. See page 51 for complete description.

Target: Grades 6-10

Primary emphasis: Teaching students to identify and decrease their risk of disease.

Materials required: A wide variety of books, pamphlets, articles, and films can be ordered with the assistance of the American Health Foundation. To facilitate ordering of materials, resource organizations' addresses and phone numbers are included in the guide.

Cost of materials: The cost varies from $3 to $16 per child per school year. The primary cost is incurred by the medical team. Curriculum guide is free.

NOTE: Costs may be reduced by recruiting volunteer nurses and doctors from the community, or contracting with the local board of health to do the screening. Blood tests, which can be expensive, may be eliminated.

Teacher training: Teacher training is offered in late June, at the completion of the school year. Workshops are conducted for 3 consecutive days by three professionals (health educator, nurse, and psychologist or pediatrician) provided by the American Health Foundation. Prior to the training period, teachers are tested to determine their overall health knowledge; content of the workshop is then modified to suit. Workshops demonstrate use of KYB materials and help teachers develop new styles and approaches for classroom use.

Additional costs: Cost of teacher training. KYB staff will train on-site for a minimum of three school districts at a total cost of $900. If more school districts are involved, the price per district is lower.

Reported effectiveness: Evaluation of behavior change conducted to date indicates that the KYB curriculum alone is not sufficient to modify students' health behavior. However, two specific intervention projects on weight reduction and smoking had greater suc-

Photograph courtesy of the American Health Foundation

cess. The weight reduction program, conducted as a pilot with a group of 119 young people was able to bring 50 percent of the students down to their ideal weight and reduced skin-fold thickness in 30 percent of the test group. The smoking intervention project, entitled Life Skills Training, also achieved significant behavioral change. For evaluation results of the LST program, see page 51.

History and current use: Know Your Body was originally implemented in 1975 in New York City and Westchester County (New York) schools, and in 1976, in Kansas City, Missouri (with funds from the American Nurses Association). In the fall of 1978, the Chicago Cancer Society adopted KYB. In 1979, 14 foreign countries expressed interest in implementing the first phase of KYB. One thousand students in a major city in each country have received health screenings and are being tested on health knowledge.

Funding: KYB is supported by funds from the National Cancer Institute (Department of Health and Human Services).

Contact:
Betty Jean Carter
American Health Foundation
320 E. 43rd Street
New York, New York 10017
212/953-1900

Other Health Hazard Appraisal Programs

Heart Health Education Model for Junior High School Students—Connecticut Heart Association

This project was conducted as a pilot program over a 2-year period, ending June 30, 1979. The program was targeted to students in the seventh and eighth grades. The goal of the project was to demonstrate the effectiveness of a risk-factor curriculum model (with an emphasis on smoking), and ultimately, to introduce a curriculum guide into the local school system. The program was implemented in 10 hours of classroom time over a 2-week period. No cost estimates are available. The program is in the process of being evaluated. Contact Dennis W. Mesenhimer, AHA, South Central Connecticut Chapter, 388 Orange Street, New Haven, Connecticut 06507, 203/777-6465.

Health Education Curricula with Smoking Components

A comprehensive health curriculum, in the strictest sense, is defined as a program of health learning experiences, beginning at the kindergarten level and continuing through senior high school, that covers a full range of subject matter on human health.[86]

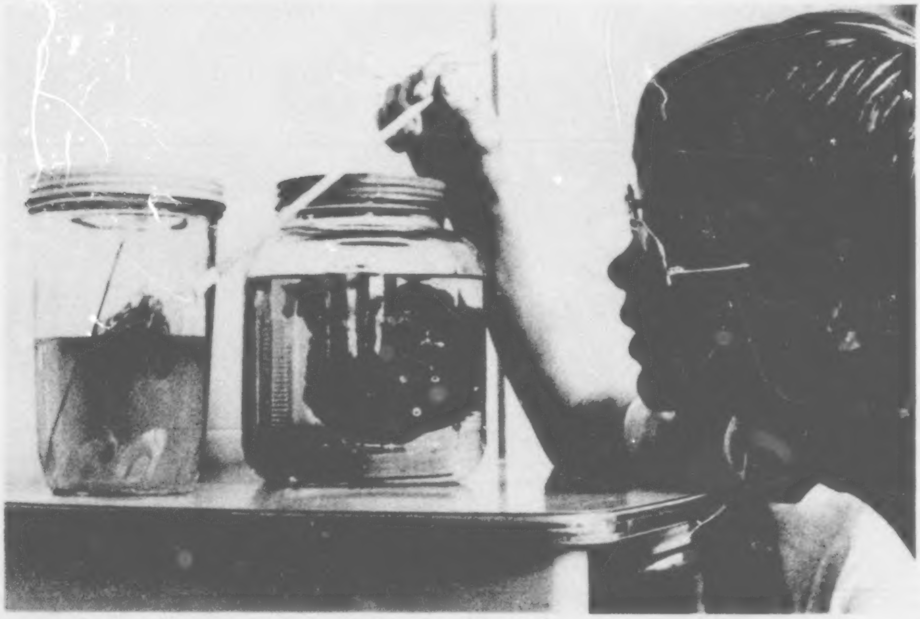
In practice, the term "curriculum" is used to define a wide range of formats: a 4-week module written as a crisis response to a current social problem among students; a textbook studied for a specified time period; or a style used by a principal in creating learning material.[87]

The topic of tobacco has traditionally been included in the health curriculum, and it is generally agreed that the subject has the greatest impact on students when it is presented according to a planned sequence of activities that builds relationships and ensures that students' learning progresses from one program to the next.[88]

The 1979 Surgeon General's Report identifies several factors that should be present in smoking education curriculum projects. These factors include extensive in-service training for teachers, sufficient funding, and a plan for placing the program in an already existing school curriculum, as well as a strong evaluative component.[89]

The five programs featured in this section have strengths in all these areas. All five have careful ongoing evaluation plans. All provide complete teacher training. Each project has been designed so that incorporation into existing school systems is easily accomplished. Each curriculum embodies the most current approaches in smoking education.

Although the programs have different emphases (one focuses on heart health, two on the understanding of the human body), each meets the criterion for true comprehensiveness: a curriculum that addresses the interrelationship of all parts to the whole system.



Chicago Heart Association
Heart Attack Prevention Program (HAPP)
Chicago Heart Health Curriculum Program

The Chicago Heart Health Curriculum Program encompasses "Body Power," a project emphasizing total health, and a smoking component entitled "Do You Mind if I Smoke?" In addition, a parental education component is currently being designed.

The "Body Power" program incorporates cognitive (knowledge) and affective (feelings and attitudes) learning techniques. "Body Power" presents scientific information about both the body and good health practices, and also provides structured experiences that help students confront their own behavior and attitudes toward health.

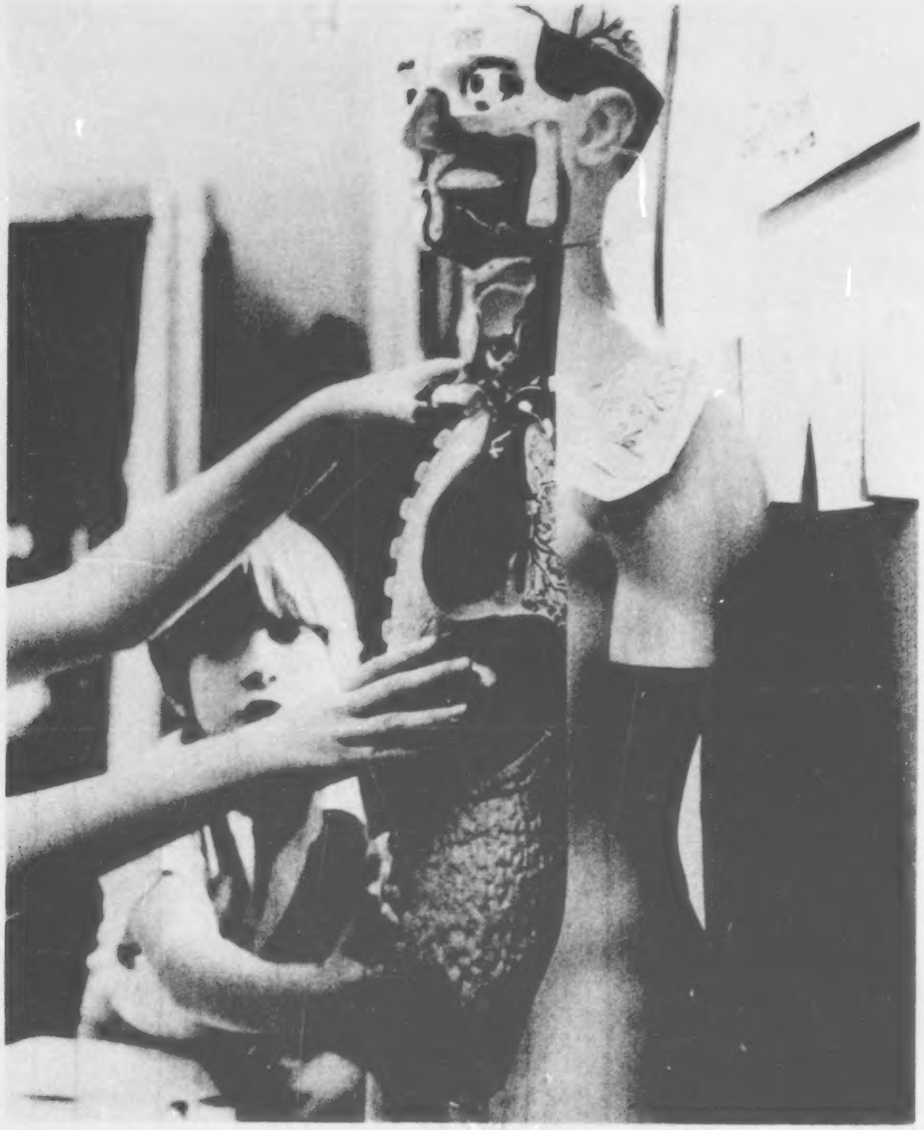
The curriculum is intended to be a supplement to the existing school health curriculum. The program requires a minimum of teacher preparation, is adaptable to individual classroom needs, and has a city orientation. Four health problem skills are addressed in the program:

- Students learn to understand the importance of feelings and emotions in relation to health.
- Students learn to recognize the importance of good nutrition for healthful living and to modify personal eating habits.
- Students examine the benefits of a well-conditioned body and establish a personal exercise program for physical fitness.
- Students are taught to relate personal health practices to the prevention and control of cardiovascular disease.

The program consists of various written and audiovisual components:

- *"Tunin' into Body Power."* –This 17-minute film introduces the "Body Power" concept to children. Utilizing a disco theme, the film motivates students to get involved in the program.
- *Student Activity Sheets.*—These poster-size (17" x 24"), brightly colored activity sheets form the core component of the program. Each student receives a set of 20 activity sheets. The content, size, variety of activities, and cartoon presentations encourage students to become committed to a "heart-healthy" lifestyle. Four modules comprise the activity sheets:
    1. "Special You" deals with the cardiovascular system and the relationship between feelings and health.
    2. "Foodwise" focuses on nutritional facts and eating habits.
    3. "Movin' " stresses the importance of exercise and the interdependence of a strong body and mind, and explains the skeletal and muscular systems.
    4. "Keepin' It Together" reviews the procedures used during a physical examination and discusses preventive measures people can take to keep themselves healthy.
- *Personal Health Log.*—Students receive their own log and medical record that helps them assume responsibility for their own health care. It also provides a private place for exploration of value issues raised in the activity sheets.
- *Filmstrips.*—Three filmstrips and sound cassettes tell the story of the "Pulse," a student rock group discovering their own good health in real life situations.
- *Teacher's Manual.*—This manual contains a summary of the program's philosophy and outlines the goals and objectives of the program. The emphasis is placed on process development in the classroom. Alternative activities and classroom projects are suggested.

It is recommended that the curriculum be taught three times a week for 1 school year at the sixth grade level. Instruction by the teacher most familiar with the students is encouraged. These procedures vary widely, however, depending upon the needs of the individual teachers and students.



"Do You Mime if I Smoke?" uses the art form of mime to dissuade students from smoking. This component includes a 27-minute film and accompanying student nonsmoking journal which expands on the concepts presented in the film. The 70-page flip-book journal includes the following sections:

- *Lookin' at Yourself.*—Activities and information oriented toward self-exploration of values and feelings about cigarette smoking.
- *Livin' and Breathin'.*—Information about smoking, health, and the respiratory system.
- *Make Up Your Mime.*—Scene by scene reenactment of two mime stories contained in the film with follow-up questions and an opportunity to create an original mime story about smoking.
- *Your Space or Mime.*—Experiences related to students' relationships with others, the environment, and cigarette advertising.
- *Exercises and Activities.*—Exercises, games, and activities about mime with antismoking messages.

The nonsmoking component takes approximately 1 month to complete in the classroom. A teacher's manual also accompanies this component. A 2-inch videotape version of the film is available for television broadcast.

Target: Grade 6

Primary emphasis: Heart health education, employing humanistic education techniques.

Materials required:

Twenty student activity sheets and accompanying personal health log
Filmstrip and cassette package
"Tunin' into Body Power" film
"Do You Mime if I Smoke?" film and accompanying student nonsmoking journal
Teacher's manual

Cost of materials:

Student sheets and log (per student)	$ 6.50
Filmstrip package	25.00
"Tunin' into Body Power" film	100.00*
"Do You Mime if I Smoke?" film	200.00*
Student journal (per student)	3.00
Teacher's manual	No charge

Teacher training: Teacher training workshops are essential to the successful implementation of the program. Experimental activities and specific cognitive/affective learning techniques are stressed. Sixteen hours of instruction by curriculum staff is suggested. Special 1-day workshops for the smoking component can be arranged.

Additional costs: The training staff is available throughout the country to conduct workshops for school districts interested in adopting this program. For details of costs, contact Joan Kruc at the Chicago Heart Association (see below).

Reported effectiveness: Evaluation of the 1977 pilot program revealed that students' attitudes toward smoking were more negative after completion of the program. Teachers' attitudes toward personal health topics were slightly more positive as a result of the program. The evaluation of this program did not include a control group.

Current program evaluation includes a cross-sectional analysis using a quasi-experimental design and longitudinal follow-up over a 3-year period. The evaluation is being conducted by outside evaluators.

Formative evaluation of the smoking component included previewing of the film by various student groups. A high level of enthusiasm for the film and "Body Power" concept was evident. An evaluation of the film and journal will be available in late 1980.

History and current use: During the spring of 1977, the curriculum was pilot-tested in 51 sixth grade classrooms in Chicago, reaching approximately 2,000 students. In addition, several Chicago suburban school systems have implemented the program within their schools. The smoking component has been pilot-tested in a variety of classroom and assembly settings. The total "Body Power" program is currently being implemented and evaluated in 200 Chicago classrooms.

Funding: Funding for this 4-year educational research study has been received from the National Heart, Lung, and Blood Institute (Department of Health and Human Services).

Contact:

Joan Kruc or Albert Sunseri
Chicago Heart Health Curriculum Program
Chicago Heart Association
20 N. Wacker Drive
Chicago, Illinois 60606
312/346-4675

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*The possibility of offering films for rent is currently being considered.

American Lung Association
Bureau of Health Education/Center for Disease Control
National Center for Health Education

Primary Grades Curriculum Project

The American Lung Association, with funds from HHS's Bureau of Health Education, has developed the Primary Grades Curriculum Project for children in kindergarten through third grade (sometimes referred to as the Seattle Project).

Each of the four units centers around a theme, and can be taught in 8 to 10 weeks. The curriculum teaches a variety of subjects, such as reading, science, and art. Through a wide range of activities, resource books, films, games, puzzles, songs, etc., children gain a positive self-image, increasing their desire to maintain healthy bodies.

Kindergarten: "Happiness is Being Healthy"
Students explore their own uniqueness, senses, and emotions. There are sections on tooth structure and function, the four food groups, hazards of smoking, and environmental pollution. Children learn to demonstrate care and concern for others.

Grade 1: "Super Me"
In this unit, children learn to name body parts and discuss their functions. An overview of the five senses is presented and special focus is placed on the senses of taste, touch, and smell. Diseases of these sense organs are discussed, including symptoms and causes, medicines, prevention, and immunization. Good health habits are reiterated: exercise, nutrition, mental health, safety, social relationships, and substance abuse are covered.

Grade 2: "Sights and Sounds"
Children learn how their eyes and ears function, and generally how the five senses inform, protect, and provide pleasure. Care of the senses is discussed, as well as how individuals compensate for the loss or diminution of these senses. Different types of emotions, why people have them, and ways to cope are explored.

Grade 3: "The Body—Its Framework and Movement"
In the third grade, students learn about the muscular and skeletal systems and their relationship to movement. The unit also covers functions of the six body systems, creative and functional movement, health habits that can upset body systems, and a wide range of technical vocabulary. Finally, children learn that they are responsible for maintaining strong and healthy bodies through decisions based on self-worth and self-knowledge.

Target: Grades K-3

Primary emphasis: Teaching good health practices through an understanding of and appreciation for body systems and functions and the development of a positive self-image.

Materials required: Classroom materials include publications, films, filmstrips, tapes, models, and pupil-prepared games and other activities. Complete ordering information is provided by the Bureau of Health Education.

Cost of materials: Material costs vary with each unit, but the average cost is approximately $1,250. The cost breakdown for the first grade unit is as follows:

Books	$ 81.44
Films	483.78
Filmstrips	416.60
Records/cassettes	31.80
Models	39.50
Posters/pictures/charts/study prints	90.56
Miscellaneous materials	114.05
	$1,257.73

These prices are based on quantities for one classroom. The bulk of the material costs are a one-time expense: they can be used in many classrooms over a number of years. Complete costs are available from the National Center for Health Education (see below).

Teacher training: Teachers are trained in teams consisting of two classroom teachers per grade level, the principal and one or two support staff (school nurse, health educator, librarian). Workshops are conducted regionally, and trainers can be brought in if several teams in one city or county are interested.

Workshops of 4 to 5 days are conducted, primarily during the summer. A team follows the four units step-by-step, as the children will later do. The experienced team will then train other teams in the district. Lists of trainers are provided by the National Center for Health Education.

Additional costs: Training fees vary based on the requirements of the individual trainer. Workshops run 4 to 5 days. Travel expenses are additional.

Reported effectiveness:

Evaluation was conducted in 1975–76 in California, Florida, New York, and Washington by the American Lung Association. The study was designed to measure changes in children's attitudes toward smoking and good health; knowledge about body systems, and the effects of smoking and good health; the social network of the classroom; teacher attitudes about teaching; and reported changes in family health practices and smoking behavior. Results indicated:

- Kindergarten and first, second, and third grade children from the five school districts who participated in the project showed highly significant gains in knowledge about body systems, good health, and smoking when compared with control groups of children from the same schools who did not participate in the project.
- Kindergarten and third grade children who participated in the project showed highly significant positive changes in attitudes about good health and nonsmoking when compared with control groups.
- Attitudes of teachers about teaching were not significantly affected by their participation in the project.
- Reported impact on families of children who participated in the project suggested that children's health attitudes and habits improved greatly, and some family smoking and other health habits changed in a positive direction.

A longitudinal study was begun in September 1977 in the North Bellmore, Long Island (New York) school district. Reports are issued annually by the American Lung Association.

History and current use:

Originally implemented in 1975 in the Seattle school district, the curriculum was subsequently extended to El Cajon, California; Lee County, Florida; and Nassau County, New York. Currently, it is in operation in 186 school districts in 26 states.

Funding:

Funds for the development, testing, and dissemination of this curriculum were provided by HHS's Bureau of Health Education, Center for Disease Control. The evaluation was funded by the American Lung Association.

Contact:

Nancy L. Evans
School Health Education Project
National Center for Health Education
901 Sneath Lane, Suite 215
San Bruno, California 94066
415/952-7922 or 800/227-6934
or
Your local lung association
or
Roger Schmidt
American Lung Association
1740 Broadway
New York, New York 10019
212/245-8000

Bureau of Health Education/Center for Disease Control
National Center for Health Education
School Health Curriculum Project

The School Health Curriculum Project (SHCP)—sometimes referred to as the Berkeley Model—consists of four units of study for grades 4 through 7. Each unit is organized around a body system and can be taught in an 8- to 10-week period.

Grade 4: Our Decisions, Our Nutrition, Our Health
Grade 5: About Our Lungs and Our Health
Grade 6: Our Health and Our Hearts
Grade 7: Living Well with Our Nervous System

Each unit includes an introduction on the importance of the particular system, the relationship between a body system, diseases to which the system is subject, prevention of disease, and a variety of creative activities in which students can demonstrate what they have learned. The effects of smoking on each system are heavily stressed.

Target: Grades 4-7

Primary emphasis: Teaching good health habits through an understanding and appreciation of body systems and functions.

Materials required: Classroom materials include publications, films, filmstrips, tapes, models, and pupil-prepared games and other activities. Complete information on materials is provided by the Bureau of Health Education (see below).

Cost of materials: Material costs vary with each unit, but range from about $1,600 at the lower grades to $3,500 at the upper grades. The breakdown of costs for fifth grade materials is as follows:

Books	$ 201.24
Filmstrips/cassettes	163.30
Films	563.00
Records	7.98
Cassettes	17.95
Models	315.75
Microslides	48.30
Microscopic slides	6.20
Photographic slides	53.00
Transparencies	15.90
Pamphlets/leaflets/posters	74.65
Miscellaneous	116.95
	$1,584.22

Prices are based on quantities for two classrooms. The bulk of material costs are one-time expenses: they can be used in many classrooms for a number of years. Complete cost information is available from the National Center for Health Education (see below).

Teacher training: In order to implement the project, a school must assemble a team consisting of two classroom teachers, the principal, and one or two support staff, such as a school nurse, health educator, or librarian. Unless principals are included, teams lack the administrative support essential to back them in their efforts to involve other teachers in expanding the program to other schools.

Two-week workshops are conducted, primarily during the summer. A team follows the units step-by-step, as the children will later do. The experienced team then trains other teams in the district.

Training is available in most parts of the country, or if enough teams in one city or county are interested, trainers are brought in. Lists of trainers are provided by the National Center for Health Education.

Additional costs: Training fees vary based on the requirements of the individual trainer. The teacher training component of the program was designed to take 10 days, however, some trainers conduct 5- or 7-day workshops. In almost all cases, travel expenses are additional.

Reported effectiveness: Approximately 30 evaluative studies have been conducted of the SHCP since 1973. Many indicate a substantial relationship between enrollment in the program and health knowledge, attitudes and smoking behavior over a 2- to 5-year period. The fifth, sixth, and seventh grade units have recently been validated by the Joint Dissemination Review Panel of the U.S. Office of Education (USOE) and the National Institute of Education. It is the first health education program to present satisfactory evidence substantiating its claim of effectiveness to this committee and to enter USOE's National Diffusion Network. A major new national evaluation of the impact of the project on pupils, teachers, parents, and school curriculum is scheduled.

History and current use: Originally developed by the National Clearinghouse for Smoking and Health, this project was launched in 1969 in San Ramon, California. It was then introduced in 10 other school districts around the country. Currently, it is in operation in over 400 school districts in 34 states.

Funding: Funds for the development and pilot-testing of this curriculum were provided by the Bureau of Health Education, Center for Disease Control (Department of Health and Human Services). The project is now funded by a wide range of organizations and institutions.

Contact:
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School Health Education Project
National Center for Health Education
901 Sneath Lane, Suite 215
San Bruno, California 94066
415/952-7922 or 800/227-6934
or
Roy L. Davis
Community Program Development Division
Bureau of Health Education
Center for Disease Control
Atlanta, Georgia 30333
404/329-3115

American Cancer Society

An Early Start to Good Health and ACS Health Network

The American Cancer Society has developed two teaching kits for elementary schools to promote the development of positive health behavior. These programs are designed to supplement comprehensive school health curricula where appropriate or to stand alone as a basic introduction to health concepts. Each of the units is centered around a filmstrip presentation that introduces a basic theme for that grade. The rest of the unit (comprising approximately 5 hours) is delivered through classroom activities, activity sheets, and wall charts to reinforce and personalize the unit theme.

Each unit contains a teacher's guide with objectives, procedures, and preparation requirements identified for each of the follow-up activities. Also included are scripts of the filmstrips so that students may play the roles themselves. The teacher's guides contain a wide range of activities designed to reinforce positive self-image, decision-making skills, and personal responsibility for health habits.

An Early Start to Good Health

Kindergarten: "My Body"
This unit introduces the students to the wonders of their body—a network of separate but interdependent organs—through song, dialogue, and activities. The different organs of the body are identified to the students. The objective of the unit is to help students understand that the body functions best when all of its parts are cared for and healthy. Each young person is also made aware of his/her responsibility for maintaining his/her health.

Grade 1: "Myself"
This unit teaches young people the concept of self and the differences between the inner (personal and emotional) self and outer (physical) self. Students learn through role play and other activities that although they may make a mistake, they can do better the next time. This unit also demonstrates that an individual's self-image can affect his/her emotional and physical health.

Grade 2: "My Health"
This unit details the requirements for maintaining a healthy and vital body, including an awareness of basic health habits, nutritional needs, exercise, and emotional outlets.

Grade 3: "My Choice"
This unit demonstrates to students that they can control their lives and futures through the choices they make. The filmstrip includes examples of the types of decisions young people make everyday, and helps them to understand that all choices are not easy (such as the choice concerning smoking). Most importantly, this unit teaches children that each choice—whether conscious or unconscious—is the responsibility of the individual.

ACS Health Network

Grade 4: "Special People"
In this unit, students discover that each human being is unique and can shape his/her own self-image. Children learn how self-esteem affects health decisions. The supplemental activities are specifically designed to assist students in improving their self-image and resisting peer pressure.

Grade 5: "Health News"
Using a news broadcast format, young people learn about the respiratory system. The various activities illustrate how the respiratory system functions and what happens when this process is obstructed by cigarette smoke.

Grade 6: "Starga's World"
This unit assists students in understanding that they have control over the choices they make, and how to apply their values to the decision-making process. In this unit, students learn to look critically at smoking advertisements.

Target:	Grades K-6
Primary emphasis:	To improve students' sense of self-worth and increase their responsibility for their lives and health choices.
Materials required:	All filmstrips, activity sheets, teacher's guides, and wall charts are contained in the kits. Regular classroom supplies are the only additional materials necessary.
Cost of materials:	Each kit is provided to elementary schools on a free loan basis.

Teacher training: Regular classroom methods are used in these units. Each activity has a clearly stated objective and outlined procedure. Therefore, no extra training is required.

Additional costs: None

Reported effectiveness: The activities and filmstrips have been tested in classrooms prior to program distribution. The educational methods used are traditional in nature.

History and current use: The Early Start to Good Health kit was originally introduced in the spring of 1978. Since that time, it has been widely used throughout the country. The Health Network program was introduced in late 1979. It was developed in response to many requests from elementary school teachers for a follow-up to the previous teaching kit. Because the program is so new, availability of Health Network may vary through 1980.

Funding: No outside support.

Contact: Your local unit of the American Cancer Society.

Other Curricula and Curricula-Support Materials*

Feelin' Good—YMCA

This program emphasizes cardiovascular health for kindergartners through ninth graders by encouraging physical exercises, teaching values clarification strategies, and providing firsthand experiences, such as learning to take blood pressure or listening to another's heart beat. The program may be taught as a special 1-week unit, or used throughout the year, several times each week. Materials cost $50; teacher training costs are extra. Contact Charles Kuntzleman, 178 E. Harmony, Spring Arbor, Michigan 49283.

Tobacco Education Curriculum—American Lung Association of New York State

Developed in cooperation with the New York State Department of Education, this nine-unit curriculum is designed to be a continuous, sequential program that supports health attitudes and decisions based upon information acquired from kindergarten through senior high school. The major premise of the Tobacco Education Curriculum is that students must develop an understanding of themselves and an appreciation of their bodies so that rational, responsible decisions about health can be made. To achieve this goal, students practice listening and communication skills, role-play situations, and make decisions after having described the alternatives and the consequences. The nine units consist of individual parts for kindergarten through sixth grade and one unit each for junior and senior high school. Each of the units contains a curriculum guide with a basic instructional program; many instructional units can be used without supplementary materials. During a pilot phase, the curriculum was assessed by 152 elementary and secondary teachers in 17 urban, suburban, and rural school districts in New York State. Cost is estimated at $3 per grade level or $25 per nine-unit set, plus shipping charges. Contact Ray Williams, American Lung Association of New York State, 8 Mountain View Avenue, Albany, New York 12205, 518/459-4197.

Our Breathtaking Lungs—Wisconsin Lung Association

Targeted at second graders, this program focuses on the function of the respiratory system through "hands-on" activities for students. The program may be implemented in 10 to 12 sessions, two to three times each week for 30-45 minutes. Approximate cost of materials: $150-$200. Contact Fran Elliott, Wisconsin Lung Association, 1701 W. Wisconsin Avenue, Box 424, Milwaukee, Wisconsin 53201, 414/933-1161.

Helping Youth Make Wise Decisions About Smoking—Mississippi Heart Association

This pilot program was first conducted in the 1977-78 school year; after initial evaluation, it was modified and implemented in 1978-79. The project's goal was the development of an educational model for fifth through ninth graders to help them make decisions about smoking. The three phases of the program include: (1) a slide presentation illustrating how the respiratory system works; (2) follow-up discussion with values clarification exercises; and (3) a work-text for students to encourage use of the knowledge they have gained. Cost of the program is estimated at $30 for the slide presentations, workbook, and teacher's guide for one class. The program is being used over a 3-day period for approximately 1 hour each day. Contact Susie Overstreet, Mississippi Cooperative Extension Service, B5426, Mississippi State, Mississippi 39762, 601/325-4086

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*See also "Additional Resources," page 83.

Putting Your Heart into the Curriculum: A Guide for Teachers and Youth Workers—American Heart Association

A guidebook containing curriculum outline, methods for the teaching of heart health, listings of resource materials including 16 games, 24 demonstrations/experiments, and 17 values clarification strategies. In addition, chapters are included on program development, in-service training for teachers, and evaluation projects. Appropriate grade levels are designated for each activity. The guide is not designed as a day-to-day lesson plan, but rather as a set of activities to be incorporated in existing curricula, inside *or* outside a school setting. Contact Betty Tevis, American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231, 214/750-5300.

Health Activities Project (HAP)—Lawrence Hall of Science, University of California, Berkeley

HAP was developed as a "curriculum-enricher," to be incorporated into existing health, physical education, or science classes. The purpose of the program is to give students firsthand experience in the functioning of their bodies, and what specific changes they can make in their own performance. There are three sets of materials. Each contains four to five modules, which in turn, contain "hands-on," discovery-oriented activities. Modules are self-contained and may be taught individually or as part of the set. HAP set I modules, for example, are titled "Breathing Fitness," "Sight and Sound," "Heart Fitness and Action," and "Action/Reaction." The program is designed for use by eighth graders. Each activity takes approximately 1½ hours to complete. Set I materials are currently in production and will cost about $1,325 per 100 children and should last for 5 years. Costs for HAP II and III are not yet known. This program was tested in 17 trial centers across the country over a 3-year period and materials were modified based on teacher/student feedback. Contact Hubbard Scientific, P.O. Box 104, Northbrook, Illinois 60062, 312/272-7810.

Social-Psychological Deterrents of Smoking in Schools Project—University of Houston

In this program, students view a series of filmed messages several times a year during regular physical education classes in the large Houston Independent School District. These films are intended to psychologically "innoculate" teenagers against social pressures to smoke. Films depict simulations of actual peer, media, and parental pressures to smoke, and ways to resist these pressures, with teenagers themselves serving as actors. Immediate physiological effects of cigarette smoking, particularly the effects of carbon monoxide on the smoker, are also presented. In addition, posters reinforce the message in the films. The project has been ongoing since 1976, and evaluation is currently being conducted that measures students' knowledge, attitudes, intention to smoke, and reported smoking behavior. Students also provide a saliva sample, which they understand can be analyzed to determine their level of smoking. This procedure is used both to verify reported behavior and to increase accuracy of self-reports. Preliminary results of the present study suggest continued impact of the intervention strategy. A 3-year continuation phase of the project has been approved to follow present participants through tenth grade, and replicate the most promising interventions in other settings. Contact Richard I. Evans, Department of Psychology, University of Houston, Houston, Texas 77004, 713/749-3152.

Smoking Cessation Programs

Recent surveys by the Department of Health and Human Services and the American Cancer Society indicate that there is a large and rapidly growing number of teenage smokers who want to quit smoking but lack the ability and/or support necessary to do so on their own.[90] In 1979, 61.6 percent of teenage smokers surveyed reported having made one or more unsuccessful attempts to give up cigarettes.[91]

Despite the need, few health planners have concentrated efforts on the development of cessation programs for young people. The majority of smoking education programs in existence today focus on prevention, and rarely set aside separate cessation components.[92]

There are a few key points which planners should bear in mind when considering implementing cessation programs for youth. For example, research in the effectiveness of smoking cessation among adults has established a 30 percent quit rate as the benchmark against which other formal programs' success should be measured.[93]

The type of evaluation problems that occur in other areas of smoking education also exist in smoking cessation programs. Changes in knowledge and attitudes about the importance of smoking cessation and short-term changes in smoking behavior are usually traced, but long-term cessation success rates are seldom determined.

This lack of long-range data is the most significant obstacle in determining the relative success of cessation program methods. Pioneering research that attempts to define which techniques are most effective with adolescents is now underway, but until long-term follow-up is conducted, preliminary results must be interpreted with caution.

Planners might also be aware that cessation programs that include long-term maintenance tend to aid participants in staying off cigarettes. Programs that tailor their follow-up efforts to the individual's special problems will also be more successful.

If a smoking cessation clinic is offered as a supplement to a school health education program, it is wise to start by working only with those students who want to become ex-smokers. This will increase the clinic's chances of success, and once these students have quit, they can exert influence on smoking friends. Forcing students to attend will probably reduce the effectiveness of the group; time will be wasted on dealing with these students' reluctance and lack of motivation.

The general trend in existing smoking cessation programs for young people appears to be limited to (1) modification of a few existing adult programs, and (2) a handful of innovative projects specifically designed for young people. Materials developed by voluntary health organizations—the American Lung Association, American Heart Association, and especially, the American Cancer Society—are used heavily, even though they are designed for adults. Thus, the development and implementation of programs that adapt these materials to the interests and needs of young smokers should make a major contribution to the success of future cessation efforts.

American Cancer Society/Boys' Clubs of America

Teenage Health Program on Smoking

This program was piloted in 1978–79, in eight Boys' Club settings throughout the country. The program's objectives include:

- Adapting and conducting at least three "I Quit" clinics for Boys' Club members with no more than 15 teens per clinic in each site. (The "I Quit" clinic format was designed and developed for adults by the American Cancer Society.)
- Recruiting 8 to 12 teenagers at each site to serve as peer-to-peer clinic aides.
- Designing and conducting three "activity models" with teens to increase awareness of the harmful effects of smoking. Such activities include dances, health carnival booths, youth-produced videotapes, science experiments, production of booklets, wall hangings, word games, and puzzles.

Target: Ages 6–18

Primary emphasis: To develop replicable, educational activities that sustain interest, create an awareness of the hazards of smoking, and help instill in a club atmosphere peer attitudes that discourage smoking.

Materials required: Each club adapted American Cancer Society or other organizations' materials, or developed their own teaching aids and activities. The adult "I Quit" clinics use ACS publications, films, awards, and the "Teenage Self-test."*

Cost of materials: Each club had $200 to spend on materials.

Teacher training: Each participating club identified a smoking program coordinator whose responsibilities included developing and implementing clubwide programs and adapting/conducting "I Quit" smoking clinics. These coordinators—all former smokers—attended a 1½-day training session, in which they were given a project orientation, and participated in a self-esteem building workshop and a peer leadership training workshop. The American Cancer Society provided training in facilitating cessation clinics.

Additional costs: For this pilot, $3,000 was spent to train clinic facilitators. The cost of replicating the training has not been determined.

Reported effectiveness: The effectiveness of this program has been measured anecdotally only. Difficulty was encountered in recruiting and maintaining participants in the "I Quit" clinics. Problems included lack of incentives, competing priorities, desire for anonymity, and—at one site—the relatively few club members who were smokers. Program coordinators determined that the clinic format was not as viable in a club setting as a school situation. However, alternate approaches to involving members in smoking cessation programs, including discussion groups focusing on values exploration, decision-making, and personality development proved very successful. Program coordinators report that many other activities were generated in addition to the clinics, including production of videotapes, booklets, science experiments, murals, etc.

History and current use: This program was piloted in Westfield, Massachusetts; New York, New York; Detroit, Michigan; Jackson, Tennessee; Omaha, Nebraska; Billings, Montana; and Escondido and Camarillo, California.

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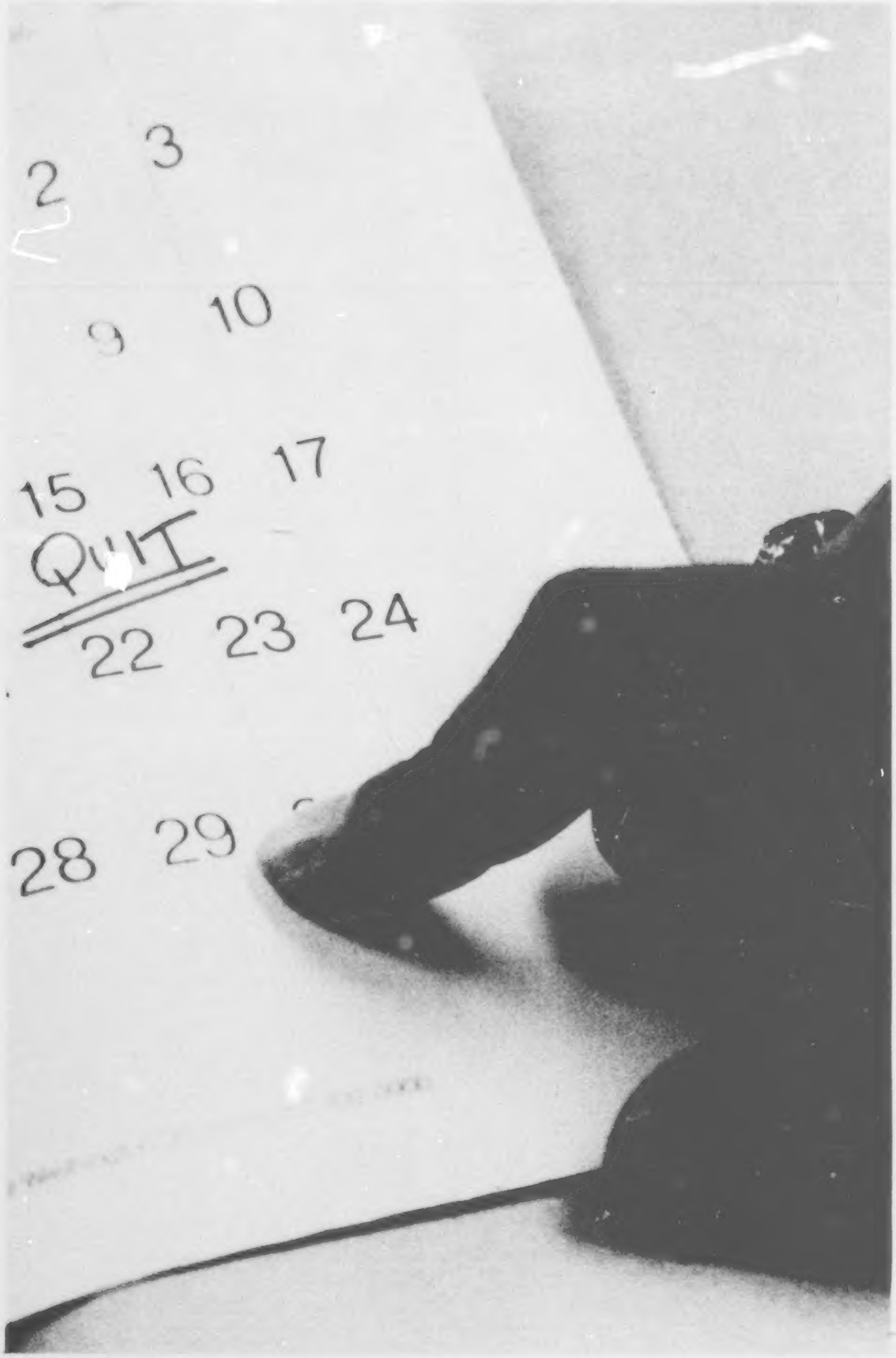
*See "Additional Resources," page 83.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QUIT
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Funding: Provided by the American Cancer Society.

Contact: Roxanne Spillett
National Health Project
Boys' Clubs of America
771 First Avenue
New York, New York 10017
212/557-8597

American Cancer Society

Smoking Cessation Clinics for High School Students

In response to numerous requests from school administrators for a smoking cessation program for high school students, the American Cancer Society has revised its adult cessation program for use in a school setting.

The program is designed to be conducted in nine 1-hour sessions during the regular school day. Additional activities are suggested if more time is available. To facilitate group process and dynamics, ACS recommends that participation in each clinic range from 8 to 18 students.

The cessation program places emphasis on the development of coping, decision-making, and values clarification skills. Each session revolves around a series of activities and self-awareness projects that help students learn to take responsibility for their smoking behavior.

The nine sessions cover the following topics:

- Administering of pretest and general group discussion
- Group discussion and test analysis
- Personal motivation
- Examining the habit
- The process of quitting
- Physiology of smoking
- Maintaining nonsmoking behavior
- Post-test and maintenance building.

A facilitator's guide is provided that includes information on implementing the program, identifying and training facilitators, scheduling logistics, facilities, and methods of recruiting participants.

Target: Grades 9-12

Primary emphasis: Teaching young people decision-making and other self-management techniques to assist them in quitting smoking; coordinating group support activities to reinforce new nonsmoking behavior.

Materials required:
Facilitator's guide
American Cancer Society films: "Who's in Charge Here" and Smoking Clinic Trigger films (available from ACS)

Cost of materials: Free of charge from American Cancer Society.

Teacher training: This program requires that the participating school provide the facilitator and allow him/her the release time to complete the training. The facilitator is trained by the American Cancer Society in a 1½-day session, which teaches all the skills necessary to run student clinics. There is no cost for the training.

Additional costs: None

Reported effectiveness: The American Cancer Society reports that students participating in this program will give up smoking at about the same rate as adults: one out of three will successfully quit smoking, with many others reducing their smoking rate. Facilitators report improved levels of self-concept and personal control among student participants.

History and current use: In 1976, the American Cancer Society, with the cooperation of the Iowa Department of Education, adapted the ACS adult cessation clinic for use by high school students. The program piloted in five schools in Iowa with teachers or school nurses acting as facilitators. Revisions were made at the close of the 1976–77 school year and the program was again piloted, this time with 20 participating schools. In 1978–79, the program was tested again with 20 additional schools. The final program and facilitator's guide was developed from these pilot efforts. ACS has begun training cessation clinic coordinators for each state and will make training programs available to representatives from local school systems beginning late 1980.

Funding: No outside funding.

Contact: Your local unit of the American Cancer Society
or
Gerald J. Maburn
American Cancer Society
777 Third Avenue
New York, New York 10017
212/371-2900

Other Cessation Projects

Youth Helping Youth: A Behavioral Approach—Pennsylvania State University

Stop smoking clinics, designed and operated almost entirely by volunteer peer leaders, are conducted in a high school in central Pennsylvania. Clinics consist of six to eight sessions of about 1 hour each. Training for peer leaders consists of use of a recently developed guide, *The Smoker's Handbook to Quitting*, guidelines for developing and conducting a peer stop-smoking program, and instruction in setting up a resource center and methods of branching out to reach community groups. This project is a pilot; operation began in late 1978. Contact Robert Shute or Richard St. Pierre, Pennsylvania State University, 19 White Building, University Park, Pennsylvania 16802, 814/863-0435.

Five-Day Stop Smoking Clinic—Wake County Public School System and Research Triangle Lung Association, North Carolina

Smoking cessation classes are held each day for 5 consecutive days during a regular class period. Films and slides are shown, a variety of literature is distributed and discussed, values clarification activities and experiments are conducted, and guest speakers make presentations. Student progress is discussed daily, and there are rewards for quitters. There is some follow-up guidance and support available for students who are unable to quit. The program is replicable for approximately $50. Contact Sally Garrett or Jerry Barker, c/o Research Triangle Lung Association, P.O. Box 10394, Raleigh, North Carolina 27605, 919/834-8235.

Smoking Cessation Program for Youth—St. Helena Hospital and Health Center, California

At the request of a local high school, St. Helena Hospital developed a 3-week smoking cessation class for students who want to quit. Classes are held every day for the 3-week period, during regular school hours. Class size is limited to 15. During the first week, students continue to smoke and examine the physiological effects, keep careful records of how much and when they smoke, take the "Teenage Self-Test," and discuss various cessation methods. During the second week, students attempt to quit. During the third week, topics covered include nonsmokers' rights and maintenance of nonsmoking. In addition, a smoking presentation is prepared for elementary and junior high students. One hour of independent study credit is offered for each 3-week cycle. There are no costs for materials. Contact Otto Rosada, Vintage High School, 1375 Trower Avenue, Napa, California 94558, 707/252-5383 or Terrence Hansen, St. Helena Hospital and Health Center, Deer Park, California 94576, 707/963-3611.

Smoking Cessation Programs Offered to Students Violating School Smoking Regulations

Suffern, New York

Suffern High School provides a mandatory education program for all students who wish to smoke. If a student does not attend, his or her smoking privileges are revoked. The main thrust of the program is to inform students of the hazards of smoking cigarettes. For more information, contact Guy Guccione, Suffern High School, Viola Road, Suffern, New York 10901, 914/357-3800.

Los Angeles and Santa Monica, California

As an alternative to student suspensions, a pilot volunteer program, entitled "Student Options on Smoking," has been adopted by several high schools in Los Angeles and Santa Monica. These programs include information on smoking cessation techniques, a teen self-test, a slide presentation, a film, and a presentation by a volunteer from the Lost Chord Society. For more information, contact Ruth Rich, Los Angeles School System, 450 N. Grand Avenue, Los Angeles, California 90053, 213/625-6000, or Frank Taylor, Santa Monica Unified School District, 1723 Fourth Street, Santa Monica, California 90406, 213/393-2785.

Conclusion

The tide in smoking education seems to be turning. More and more, among decision-makers at all levels, there is an understanding of the need for schools to teach students to take better care of themselves. More and more, program planners are recognizing that one function of the schools is to increase students' decision-making abilities, rather than attempting to force smoking behavior change.

Educators continually express frustration because of the lack of adequately evaluated smoking programs and the ensuing lack of information on "proven" techniques for the prevention of smoking among young people. *Smoking Programs for Youth* has attempted to identify what is known and what programs are currently being conducted that are responsive to these known factors. In many cases, programs in use are being carefully evaluated. In years to come, much more information should be available to planners of smoking education programs.

In addition to the exemplary programs described, program planners should refer to the items in the Appendix. Resource materials listed can provide the foundation for program efforts, and organizations may be invaluable sources of advice and assistance, often at little or no cost. The health education texts provide information on a wide range of methods and materials, and are excellent resource books to have on hand.

Ideally, *Smoking Programs for Youth* will serve as a guide to the development and implementation of smoking programs. Armed with information on trends in youth smoking, past and current approaches being taken, methods of implementing programs, and examples of current projects in effect, interested administrators, teachers, parents, and others should feel confident in both the value of smoking efforts targeted at youth, as well as their own personal ability to begin programs in their community.

However, no book can substitute for the interest and enthusiasm of individuals. In hard economic times, in which cutbacks in school budgets are common and administrators are hard-pressed to consider making curriculum changes, it often requires the extra dedication and commitment of educators, parents, and other community members to introduce and update smoking education programs. While *Smoking Programs for Youth* may serve as a tool, it is only through the work of such dedicated individuals that a future smoke-free generation may become a reality.

Appendix

Additional Resources

Smoking and Health—An Annotated Bibliography (School Edition)

This bibliography lists print and audiovisual materials appropriate for use in smoking programs for young people. Topics covered include risk and prevention, cessation, and nonsmokers' rights. In addition, there are lists of teaching resources and Spanish-language materials. A total of 125 different items are listed. Order from Office of Cancer Communications, National Cancer Institute, Building 31, Room 10A18, Bethesda, Maryland 20205. Cost: free. Order No: HEW (NIH) 79-1908.

The Smoking Digest

A comprehensive look at the smoking issue, including demographics, biomedical effects, public information and education campaigns, cessation, legal restrictions, workings of the tobacco industry. Available through National Cancer Institute, Office of Cancer Communications, Building 31, Room 10A18, Bethesda, Maryland 20205. Cost: free.

Why Health Education in Your School?

A pamphlet which describes what is and is not health education, and provides rationale for the establishment of comprehensive health education programs in schools. Available through Order Department, American Medical Association, P.O. Box 821, Monroe, Wisconsin 53566. Cost: $0.55 each for 99 copies or less (price decreases with quantity ordered). Order No: OP-331.

School Health in America—A Survey of State School Health Programs

Results of a study, completed in 1976, which determined the status of state-level school health programs. Includes state requirements for school nurse certification, school health educator certification, state school health education programs, environmental health standards. Order from American School Health Association, ASHA National Office Building, Kent, Ohio 44240. Cost: $1.00.

Smoking and Health: A Report of the Surgeon General

Released in 1979, 15 years after the publication of the first Surgeon General's Report which linked smoking and disease, this document is a compendium of 22 scientific papers on smoking and health. Thirteen of these report on health consequences of smoking. The remaining chapters deal with behavioral aspects of smoking and with education and prevention. Youth smoking topics covered include psychosocial determinants and prevention strategies, the role of educators, and youth education. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Cost: $9.00. Order No: 017-000-00218-0.

Teenage Self-Test

This self-test asks questions about attitudes, opinions, and feelings toward smoking, and contains instructions for taking and scoring the test, and comparing the score with that of other teenagers. Order from Office on Smoking and Health, Park Building, Suite I-58, 5600 Fishers Lane, Rockville, Maryland 20857. Cost: free. Order No: HEW (CDC) 76-8723.

Teenage Smoking: Immediate and Long-Term Patterns

Results of two surveys conducted in 1979 under the auspices of the National Institute of Education, Department of Health, Education, and Welfare. The first is an update of surveys conducted among 12- to 18-year-olds in 1968, 1970, 1972, and 1974. Demographic information is included as well as factors that predispose youth to smoke (smoking behavior of parents, siblings, best friends; educational level of parents; educational aspirations of teens; employment background; age; grade in school; sex; etc.) and attitudes related to smoking. The second survey follows adolescents originally interviewed in 1974, now aged 17 to 23. These young people were questioned about their current smoking behavior and attitudes as well as their smoking histories during the 5-year period, 1974–79. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20401. Cost: $6.00. Order No: 017-080-02074-2.

Teenage Smoking: National Patterns of Cigarette Smoking, Ages 12 through 18

This survey, conducted in 1968, 1970, 1972, and 1974 by the Department of Health, Education, and Welfare, reports the number of 12- to 18-year-old smokers in the United States, as well as the effects of parental, sibling, and peer smoking, young people's educational aspirations and work practices, parental education, and other factors on a young person's decision to smoke. Order from Office on Smoking and Health, Park Building, Suite I-58, 5600 Fishers Lane, Rockville, Maryland 20857. Cost: free. Order No: HEW (NIH) 76-931.

Cancer Education: Resources for Students and Teachers (K-12)

Comprehensive listings of audiovisual and printed materials on cancer for use in health education programs in the schools, divided into teacher and student resource sections and by grade levels (K-3, 4-5, junior high, senior high). Order from Wisconsin Council for Cancer Control, Public Information and Education Committee, 1900 University Avenue, Madison, Wisconsin 53705. Cost: free.

Cancer Education in Schools—A Guidebook for Teachers

A series of seven lessons for 10-year-old children and older, covering the definition and causes of cancer, prevention, control, and treatment, and relationship of smoking and lung cancer. Recommendations are made regarding specific courses into which the lessons might be incorporated. A resource section and glossary are also included. Order from the International Union Against Cancer, 3 Rue de Counseil-General, 1205 Geneva, Switzerland. (UICC Technical Report Series—Volume 38). Cost: 12 Swiss francs.

Guidelines for Development of School Policies Regarding Smoking

A booklet designed to assist schools in the formulation, review or redesign of school smoking regulations. The text covers the following areas: basic considerations, rationale, methodology for the establishment of policy, policy content, stages of implementation and additional resources. Order from Publication Distribution Sales Desk, New York State Education Department, Room 169 EBA, Albany, New York 12234. Cost: $0.50.

Resource Organizations

American Cancer Society*
777 Third Avenue
New York, New York 10017

American Heart Association*
7320 Greenville Avenue
Dallas, Texas 75321

American Lung Association*
1740 Broadway
New York, New York 10019

Office of Cancer Communications
National Cancer Institute
National Institutes of Health
Building 31, Room 4B39
Bethesda, Maryland 20205

Office on Smoking and Health
U.S. Department of Health and Human Services
Park Building, Suite I-58
5600 Fishers Lane
Rockville, Maryland 20857

National Interagency Council on Smoking and Health
Room 1005
291 Broadway
New York, New York 10007

American School Health Association
1521 South Water Street
P.O. Box 708
Kent, Ohio 44240

Association for the Advancement of Health Education
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

Bureau of Health Education
Center for Disease Control
1600 Clifton Road
Atlanta, Georgia 30333

United Cancer Council
1803 N. Meridian
Indianapolis, Indiana 46202

Office of Health Information and Health Promotion
U.S. Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D.C. 20201

Special Assistant for the Comprehensive School Health Initiative
Office of the Deputy Commissioner for Elementary and Secondary Education
U.S. Office of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

National Center for Health Education
901 Sneath Lane, Suite 215
San Bruno, California 94066

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*Consult your local telephone directory for listings of local chapters.

Contemporary Texts on School Health Education

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Barrett, Morris. *Health Education Guide: A Design for Teaching.* (2nd ed.) 1974. Philadelphia: Lea and Febiger.

Bedworth, David A. and Bedworth, Albert E. *Health Education: A Process for Human Effectiveness.* 1978. Scranton, Pennsylvania: Harper and Row Publishers, Inc.

Bruess, Clint E. and Gay, John E. *Implementing Comprehensive School Health.* 1978. Riverside, New Jersey: Macmillan Publishing Co., Inc.

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21. DHEW, *Teenage Smoking: Immediate and Long-Term Patterns*, pp. 12-18.
22. DHEW, *Teenage Smoking: National Pattern*, p. 24.
23. A.L. McAlister, "Tobacco, Alcohol, and Drug Abuse," p. 200.

24. DHEW, *Teenage Smoking: Immediate and Long-Term Patterns*, p. 18.
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